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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

H.R. 2788

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF THE INTERIOR, AND RELATED AGENCIES, FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1990, AND FOR OTHER PURPOSES

Part 1 (Pages 1-967)

Department of Education
Department of Energy
Department of Health and Human Services
Department of the Interior
National Endowment for the Arts
National Endowment for the Humanities
National Gallery of Art
Nondepartmental Witnesses
Smithsonian Institution

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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

MONDAY, FEBRUARY 6, 1989

U.S. Senate,
Subcommittee of the Committee on Appropriations,
Washington, DC.

The subcommittee met at 10 a.m., in room S–128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd, McClure, Stevens, Cochran, and Domenici.

NATIONAL ENDOWMENT FOR THE ARTS

STATEMENT OF FRANK HODSOLL, CHAIRMAN

ACCOMPANIED BY:

- HUGH SOUTHERN, DEPUTY CHAIRMAN FOR PROGRAMS
- PETER J. BASSO, JR., DEPUTY CHAIRMAN FOR MANAGEMENT
- ADRIENNE NESCOTT HIRSCH, DEPUTY CHAIRMAN FOR PUBLIC PARTNERSHIP

PREPARED STATEMENT

Chairman Byrd. The subcommittee will come to order.

This morning marks the first hearing of the Interior and Related Agencies Appropriations Subcommittee on the fiscal year 1990 budget submitted by former President Reagan. President Bush is announcing his revisions to the Reagan budget on Thursday. There are nine. Nevertheless, we will proceed with the hearing, with the understanding that the subcommittee may be back in contact with the agencies before us today regarding those aspects of President Bush's proposal that affect their budget requests.

Today we will receive testimony from three agencies: the National Endowment for the Arts, the National Endowment for the Humanities, and the Bureau of Mines. We will begin with the Arts Endowment.

Testifying on behalf of the Arts Endowment will be the Chairman, Mr. Frank Hodsoll.

The fiscal year 1990 budget request for the National Endowment for the Arts [NEA] is $170,100,000. This represents a slight increase of $1,010,000 over the funding enacted for the Endowment for fiscal year 1989.

Mr. Hodsoll, why don't you present your associates who have come here with you today? Your complete statement will be made a part of the record. And if you would please introduce your associates and summarize your remarks or read them in totality if you like, we will then proceed with questions.

INTRODUCTION OF ASSOCIATES

Mr. Hodsoll. Thank you very much, Mr. Chairman.

Let me begin by introducing my associates. First, on my left, is Hugh Southern, who is our Deputy Chairman for Programs. On my immediate right is Jack Basso, who is our Deputy Chairman for Management; and on his right is Adrienne Hirsch, who is our Deputy Chairman for Public Partnership.

If I may, Mr. Chairman, rather than read my prepared statement into the record, I would like to, if it would be appropriate, to simply make a few general points, and I'll be very brief.

Chairman Byrd. Very well.

Your statement will be included in the record as though read in full. Is this the statement that I have here? There have been no changes?

Mr. Hodsoll. I assume so. I don't know.

Chairman Byrd. All right. Please proceed.

INTRODUCTORY STATEMENT

Mr. Hodsoll. Thank you, Mr. Chairman.

First of all, I'd like to present you with something, because this represents some of the work that we have done in the past. I remember very fondly, Mr. Chairman, about 4 years ago when you presented me with a record of your fiddle playing. And I would like to present you in return with something that we have supported, which is a tape of the "Masters of the Violin," produced by the Council of Traditional Arts, which I hope you will find interesting when you have a chance at some point to sit and listen to it. The tape is an example of one of the things that we've been doing since this committee met last year with regard to our fiscal 1989 budget.

I am pleased to report that there are a number of good things that have been happening in the arts. Very briefly, I think one thing that may be of interest to the committee is that the field of opera musical theater in the last several years has truly burgeoned. Seven years ago there was little of the new getting into the traditional operatic repertoire. Today, almost every major opera company is in fact commissioning or about to commission new work. So that is very encouraging to us.

I am happy to note also that we are beginning our new Challenge III Program, and some of the grants from that program are going toward helping with the compensation of artists. Many of the artists that we support, Mr. Chairman, are undercompensated in our view, and so a grant, for example, of $1 million for the Center Stage in Baltimore has resulted in their trustees joining with us in putting the focus on and actually increasing the compensation for theater artists.

I am also happy to report that under Challenge III, a seven-State consortium has been funded to help provide resources for individual artists.

I am equally glad to report that we were able to give a grant to the Ogilvie Institute last year for their fourth annual jazz concert, which is an example, I think, of helping bring the art of jazz to people that it would not otherwise be available for.

Now, all of these are good things and I could go on. I know that time is short. Let me mention, if I may, an important down side for the arts. Sixty-one percent of Americans don't go to the things that we support, the performing arts museums and galleries, and it is that fact, which derived from a census survey of 17,000 households, that has led us to place renewed emphasis on arts education. That, of course, is the emphasis of our fiscal 1989 budget where our proposed additional million dollars that you, Mr. Chairman, mentioned is for arts education.

We started that renewed emphasis in 1983. We had congressional hearings on the House side in the Committee on Education and Labor in 1984. Our reauthorization in 1985 included arts education as a specific statutory purpose of the Endowment. We changed our guidelines in 1987. We produced our report, "Toward Civilization," in 1988.

And, as of 1989, I'm pleased to report, sir, that over one-half of the States are working with us. We have money from the Department of Education now for our research centers and money from the Getty Trust for a television series on the arts for young people. On this list, we have three pilots completed and we hope to have a series in the next year or two.

Some of the several States that have joined us are moving forward with implementation. And part of the additional money that we're requesting is for implementation. For example, the state arts council of South Carolina came and reported to our National Council over the weekend on the extraordinary progress they've made, including every school district in the State of South Carolina. They have the Governor's support and the legislature's support, and I really do think they are making progress.

I also think that the climate is right for arts education at this time. In 1980 there were only two States that had graduation requirements from high school in the arts. Today, there are 29 such States. But the real question is: What is the requirement? Some of the additional money that we're requesting, Mr. Chairman, which we hope, of course, this committee will look favorably upon, is for trying to help the States and the localities—we wouldn't do this at the Federal level—to help them to make their schools better in this respect.

I think the other point that I would like to make is: neither the arts nor the population is distributed equally across the country, and there's been a problem in the rural areas of the country, the small towns and cities across the country, and we've recognized that. We've created some new programs that we hope will help deal with this issue. We have done this not just in the last year, but over the last 2 or 3 years. This is a priority at the Endowment.

I think particularly of our new Dance on Tour Program which is getting dance companies into smaller towns than where they've never been before; a new initiative on the part of our Expansion Arts Program, where $240,000 a year—we're just starting this this year—for the next 3 years will attempt to create six projects to increase the presence of the arts in six different smaller towns or more rural areas of the country in the hope that that might show how we can do this in other areas of the country.

Chairman **Byrd**. What are those six smaller towns?

Mr. **Hodsoll**. Well, the guidelines are out. The applications are coming in this year, so I can't tell you yet.

Chairman **Byrd**. How does that work?

Mr. **Hodsoll**. Basically we have guidelines now on the street, and applications will be made from States and towns across the country, and then a panel will make a judgment as to which of those to recommend for these initial grants.

So that's where it is, but we'll be happy to report back as soon as we have the grants actually issued. In any event, this is an area that we're trying to make a greater effort on.

I would simply conclude now, Mr. Chairman, by saying that there is much to do. Much has been accomplished, I believe, by the National Endowment over its 23 years of existence. There are Federal budget constraints, as you certainly know better than I, so we are particularly pleased to be able to submit to you a budget that has an increase in it for arts education and we hope that this Committee will give it favorable consideration.

Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF FRANK HODSOLL

Mr. Chairman, Members of the Subcommittee:

It is a pleasure for me to be here today to discuss the budget request for the National Endowment for the Arts for FY 1990. On behalf of myself and everyone at the Endowment, I thank the Subcommittee for its continued support for the work we do.

For FY 1990, the Endowment is requesting a budget of $170.1 million. This level, slightly above our FY 1989 appropriation, supports the Administration's dedication to providing leadership in the arts while acknowledging the need to restrain Federal spending.

We propose $142.95 million in grants and administration, and $27.15 million in matching grants (indefinite Treasury and Challenge). By supporting the best of this country's art and artists, and by pioneering new and timely intiatives to address important areas of need and opportunity, the Endowment helps to support and encourage advances in the arts, and access to and appreciation of artistic excellence. The Endowment continues to work with other funding sources, both public and private, to reach these goals.

In recent years these partnership efforts have been rewarded by increased giving to the arts by the private sector and increased arts appropriations from state and local governments. In the private sector, the American Association of Fundraising Counsel reports private giving to cultural activities was $6.4 billion in 1987, up 10 percent from 1986 and double what it was in 1980. State support has increased by 144 percent since FY 81 and approaches $270 million for FY 89, while local arts agency support continues to show an upward trend. Corporate support, which has recently been the fastest growing area of arts support has levelled off in the last two years.

Equally gratifying is the fact that overall philanthropy continued to increase in 1987, the first year of the Tax Reform Act. Close attention will, nonetheless, have to be paid to the statistics on gifts of appreciated property in 1988; while the value of gifts of appreciated art to members of the Association of Art Museum Directors was up by 17 percent in 1987 versus 1985, it was down by 35 percent versus 1986.

1988 Endowment Highlights

All areas of the country are served by Endowment programs. In FY 88, the Arts Endowment awarded approximately 3,700 grants to organizations and agencies in all fifty states. Nearly 800 grants and fellowships were awarded to individual artists and arts professionals across the country. In addition, many artists and arts organizations benefitted from the Endowment's vital and continuing partnership with the state arts agencies and regional arts organizations. In FY 88, the state and regional agencies supported arts programming in communities throughout the nation with the help of $24.4 million provided through State Programs and more than $8.5 million in project support from other Endowment programs.

In 1988, Endowment program efforts (many of which will continue in FY 90) included the following efforts.

o The Inter-Arts Program's Commissioning and Touring Initiative supported commissioning and touring of new works in the performing arts and the development and coordination of model alternative touring networks. The Inter-Arts Program also established, with support from the Rockefeller

Foundation and the Pew Charitable Trusts, a National Task Force on Presenting and Touring the Performing Arts to explore the role of presenting and to consider ways to implement that role.

o The Challenge III Program awarded 25 grants in its first round, totaling over $9 million. These grants support major projects designed to have a long-term effect on artistry, increased access to the arts, deeper appreciation of the arts, and increased non-Federal funding of the arts. Funded projects include a new television series on the history and development of dance; a project to increase compensation of theater artists; and a consortium project of seven state arts agencies to increase support for individual artists.

o The Arts in Schools Basic Education Grants program has awarded 28 planning and 8 implementation grants to 26 state arts agencies. These projects are laying the foundation for statewide programs of serious and sequential arts education in grades K-12.

o Progress continues at the national arts and literature research centers, co-funded by the Arts Endowment and the U.S. Department of Education. The centers, which are located at the University of Illinois at Champaign-Urbana, New York University and the State University of New York in Albany, are conducting research which we hope will provide information and models for improving arts education in schools.

o The Endowment continues to bring the best of the arts to the public by supporting major television broadcast series. In FY 88, eight ongoing television series (e.g., Voices and Visions, America by Design, Wonderworks, American Masters) were funded. These series reach audiences in the millions all across the country. The Endowment has also begun to facilitate the distribution of selected series on cassettes to libraries, schools and the general public.

o Local Programs and the Endowment's Office of Special Constituencies have developed a special one-time program designed to support model demonstration projects which encourage greater access to arts activities for older and disabled people.

Also in 1988, as required by the Arts, Humanities and Museum Amendments of 1985 (P.L. 99-194), the Endowment completed and transmitted to the President and Congress two major reports on the arts:

Toward Civilization is an analysis of the state of arts education in our nation's schools. The report, which has been well received, was widely distributed (over 160,000 copies) to the arts and education communities as well as to representatives of local, state and Federal government. It has also been the subject of discussion at statewide meetings, regional and national forums, where Endowment staff and I have made presentations and held discussions relating to the report's findings and recommendations. By documenting the gap between the stated commitment and resources allocated to arts education and actual arts education as it exists in schools, and by presenting a comprehensive set of recommendations for improvement, the report has helped bring arts education more seriously to the table as a part of state and local education reform.

The key problem, as we see it, is that basic arts education does not exist in America today. To be sure, at some point during the course of their education, most students are exposed to some form of instruction in music, drawing, painting, or crafts and some students -- particularly the gifted and talented, or at least the college-bound -- may receive more substantial exposure to the arts. But we have yet to find any of our schools which require all their students to master a core curriculum in the arts -- a curriculum which includes some sense of all the arts, including the ubiquitous design and media arts, and a balance among creation, performance, history and theory. For an arts curriculum to be truly basic, it must be sequentially taught by teachers who are knowledgeable and well-prepared. And most important, it must give students the chance both to understand and to participate more fully in our civilization; to gain a sense of, and participate in, the creative process in art; to understand and communicate through visual and aural images as well as words; and to make informed and discerning choices among the products of the arts. It must, in sum, make our young people culturally literate.

In Toward Civilization, we have found a national audience interested in this message. A centerpiece of our FY 90 budget request is a proposed $1 million increase for the Arts in Education Program. This increase would permit the Endowment to follow through on the important research and recommendations contained in Toward Civilization. Specifically, it provides for technical assistance to state arts agencies moving from planning to implementation of basic arts education; assistance of program evaluation at the state level; and demonstrations of arts curricula sequentially linked from elementary through high school, as well as the development of prototype arts curricula (all the arts in high school, cultural history as a part of U.S. history, the media arts in junior high, and the design arts in upper elementary grades).

The Arts in America was the second report completed in 1988, the first in a series of biennial reports mandated by Congress on the state of the arts. In preparing this report, the Endowment consulted with artists, representatives of state and local arts agencies, a wide variety of service and trade organizations representing a diversity of arts groups, and organizations concerned with arts education. In addition, extensive discussions and exchanges were carried out with numerous advisors in the field, including Endowment panels, the National Council on the Arts, and an ad hoc group on the State of the Arts which convened in June 1988. The report describes key elements of strength and weakness in each of the fields (both commercial and not-for-profit).

While the report briefly sketched the major issues in each arts field within the context of its individual history, certain broad themes emerged: the extraordinary impact of America's popular culture and its dissemination through the media; the making of American culture as it is affected by demographic change and cultural cross-fertilization; the role of not-for-profit arts organizations in providing "research and development" venues for artists' experimentation; the role of the media in building audiences for the arts; the growing impact of digital electronics technology on artists and their work on the one hand and, on the other, the necessity for audiences to become more "media literate" as technological advances shape many aspects of our society; and the critical importance of basic and sequential arts education, especially in view of the positive relationship between exposure to the arts as a child and participation in the arts as an adult.

As part of the mandate for this report, Congress required the Endowment to undertake the development of a practical system of national information and data collection on the arts, artists, arts groups and their audiences. To this end, The Arts in

America includes an initial research agenda for the future. In 1989, the Endowment plans to convene a Research Advisory Group, composed of professionals in arts research and representatives of the arts fields, as well as public and private agencies concerned with arts support and data, to provide guidance for future data collection. The Endowment believes that such data should, over time, yield valuable trend information on developments in the arts in this country and provide a context for Endowment and field long-range planning.

FY 1990 Proposed Budget

In FY 90, we propose a budget of $170.1 million, $1.1 million above our FY 89 appropriation. The FY 90 budget contains some budget and policy modifications which merit special mention.

Grants

We request $123.55 million in program grant funds, to allow the Endowment to continue to support outstanding artistic projects and arts organizations, artist fellowships, state and local arts activities, and other efforts to strengthen artistic excellence, provide access to and appreciation of the arts, and encourage arts education in our schools. Specifically, our FY 90 grants funding request contains:

o Continued support for artists and arts organizations of excellence. Funding for the twelve discipline and multi-discipline programs is basically maintained at the FY 89 enacted level, enabling these programs to continue to enhance the arts by supporting work that is artistically excellent and of national or regional significance. Included within this funding are:

- Continued support for the Endowment's partnership with the Wallace Funds which assists the Meet the Composer/Readers Digest Commissioning Program in awarding commissions in concert music, opera, music theater and jazz;
- Increased grants to theater companies, allowing them to sustain past achievements and plan future artistic growth;
- The Museum Purchase Plan, which assists museums in acquiring the works of living American artists;
- Increased support to individuals and organizations to commission and/or develop new opera or musical theater works;
- Design fellowships to support independent study and travel in the United States for the purpose of better understanding the American built environment;
- Grants to individuals and organizations to document major dance works through the use of film and video tape.

o Increased support for arts education (from $5.6 million in FY 89 to $6.6 million in FY 90). An increase of $1 million over the FY 89 appropriated level would enable the Endowment to enhance its leadership role in the field of arts education by working with state arts agencies and others to build on existing artists-in-residence programs and plan for and make arts education a basic and sequential part of the K-12 curriculum. Increased funds would also be used to support the development and evaluation of model programs, curricula and courses aimed at achieving basic arts education K-12.

o Refocused and expanded support for dance touring. After evaluating the Dance/Inter-Arts/State Touring Initiative (DIS), which was initiated in 1983, we plan an improved program called Dance on Tour. Dance on Tour features a regional component to assist regional organizations in supporting multi-state touring of dance companies and artists, and a state component to assist state arts agency projects designed to strengthen the presentation of out-of-state dance companies and artists.

o A Rural Arts Initative. In response to the needs and unique challenges facing rural communities, the Endowment has developed an initiative designed to help organizations in those communities with the potential to develop artistically and administratively. The initative, funded through the Expansion Arts Program, is increased in FY 90. It is designed to make matching grants to state arts agencies that will in turn be regranted to rural arts organizations within their state borders.

o An initiative to enhance multicultural presenting organizations. Building on the successful Organizational Development Pilot between the Expansion Arts and Dance Programs, a special effort will be made by the Expansion Arts and Inter-Arts Programs to help develop and strengthen multicultural presenters across the country.

Matching Funds

In FY 90, the Endowment requests $27.15 million in matching grant funds -- $12 million for Treasury and $15.5 million for Challenge -- to maintain and generate increased non-Federal contributions to the arts. Specifically, our FY 90 matching funds request:

o Increases the level of Treasury funds to $12 million. These funds, which are matched three to one, will support large-scale projects undertaken by organizations in the performing arts as well as the fields of media arts and museums and the restored Advancement Program.

o Restores the Advancement Program to full participation. A $2 million increase in funding for the Program is requested to enable 37 organizations, all of which have successfully completed Phase I, to graduate to Phase II. Some of America's most artistically daring organizations are institutionally unstable; the purpose of the Advancement Program is to help them advance in this respect. The Advancement Program operates on a two-phase funding cycle. The first phase, lasting approximately fifteen months, consists of technical assistance in which management consultants retained by the Endowment assist the development of comprehensive artistic and management plans. Upon successfully completing the first phase, participant organizations can apply for matching grants to implement the strategies developed during the first phase. FY 90 will be the first time, in recent years, that organizations are participating in both phases of the Program.

o Decreases the level of funds for the Challenge Program. The Endowment requests $15.15 million in Challenge funds. In FY 90, the Program will fund Challenge III applications only, as FY 89 marked the final year of Challenge II grants. Challenge III, which began in FY 88 with grants totalling $9 million, supports projects aimed at change and growth to benefit the arts and their audiences. Until the Endowment gains more experience with the quantity and range of applications submitted to the Challenge III program, the requested level should be sufficient to fund the best applications. This level will need review in the development of our FY 91 budget request.

Administration

To ensure a strong administrative support structure, our FY 90 budget request for administrative operating funds is $18.4 million. This funding request, an increase of $950,000 over our FY 89 appropriation, is needed to maintain the efficiency of our internal management. This level allows us to cover increased administrative costs which are beyond our control in the areas of personnel compensation, rentals and contractual services; restore information systems development management activities deferred in FY 89; and to maintain our authorized level of 262 full-time equivalents. Mindful of these increased costs, the Endowment continues to implement management improvements to contain administrative costs.

****

The National Endowment for the Arts proposed budget of $170.1 million maintains a strong Federal presence in the support structure for the arts in America. This level, slightly above our appropriation in FY 89, will allow us to advance several important goals. There will be increased efforts made toward the goal of basic and sequential arts education in the schools through new intiatives in our Arts in Education Program. Artistic excellence will be fostered through our grants to organizations, artists and arts professionals at levels equivalent to FY 89. Increased emphasis will be placed on assisting emerging arts organizations of high artistic quality to gain greater financial and administrative stability and to develop and meet long-term goals. The Endowment will continue to encourage increased funds at the state and local levels through our matching grants to those entities. Finally, the initiatives and leadership activities planned for FY 90 will ensure that the Endowment continues to be both responsive to the field and a leader in advancing the arts of our nation.

ARTISTS IN SCHOOLS BASIC EDUCATION GRANTS

Chairman **Byrd**. The fiscal year 1990 budget proposal includes a request of $1.4 million for the Artists in Schools Basic Education Grant. These grants are to promote arts as a basic element of education. The budget proposes to fund 28 planning grants and eight implementation grants in fiscal year 1990.

Given the $1.3 million provided for this program in fiscal year 1989, how many planning grants would be funded in 1989, and will all of these be eligible for implementation in fiscal year 1990?

Mr. **Hodsoll**. I am going to, if I may, Mr. Chairman, turn to my deputy on the precise number.

Ms. **Hirsch**. The variety of planning grants, Mr. Chairman, will come in from States across the country that are now preparing them. We have been half way through the States and we expect at least a like number to come again in fiscal year 1990 for the planning.

The numbers of implementation grants for fiscal year 1990 are an unknown quantity. A majority of those who have done planning may indeed be eligible to come in. Some of those who requested and received the first year of planning have also been eligible to come in, if the planning process was not completed, for a second year of planning. And that again would be the case.

Chairman **Byrd**. Would there be any reason why some of those funded for planning should not be eligible for implementation?

Mr. HODSOLL. I can answer that, if I may, Mr. Chairman. There will be reasons where some of those funded for planning will not be competitive for implementation, but they will certainly be eligible for implementation. That is, where the planning has not resulted in the—how shall I say—identification and support of projects that would, under our guidelines be excellent from our panel's point of view with regard to implementation.

So we expect that there will be more planners in the early years, and that has been the case, and fewer implementation grants. But then we expect, as we go out in fiscal years, that there will be more implementors than planners. So, we expect that this will grow in that progression.

Chairman BYRD. The grants are intended to promote arts as a basic element of education. How do they do that?

Mr. HODSOLL. Thank you, sir.

First of all for the planning side of it, the grants provide an incentive for State arts agencies and State departments of education to get together jointly and produce plans that are agreed by both sides that would increase the amount and quality of arts education in the schools.

You need the education side in order to accomplish this, and there has been precious little—until recently—real collaboration, we believe, between the education side and the art side. So the money provides an incentive for that.

Once the planning is completed, we ask the States to come back to us again with the signature of both the director of the State arts agency and the superintendent of public instruction in the State, with respect to where Federal moneys can discretely help a specific school district or, at the State level, the development of curriculum that can help move arts education forward. We have already given our first implementation grant—South Carolina is one example, I might add, of that.

Our money goes to fill gaps where State money has not been. In some cases it's used to produce a new curriculum, as was the case in South Carolina. In other cases, it's used for teacher training institutes in order to help with the retraining of teachers in some of these areas. In other cases it's used for the development of evaluation materials, and so on.

We are a very small part of this picture, and what we hope to do, both through our advocacy and our money, is help the States—they already have significant resources in the arts—to use those resources to achieve, in the end, for all young people—whether they go on to college or not, whether they are gifted and talented or not—a bit of cultural literacy.

Chairman BYRD. What has been your experience in West Virginia?

Mr. HODSOLL. Our experience in West Virginia, I might say, has been very good, Mr. Chairman. I was in West Virginia just last fall. Your State pioneered a program—we gave them an initial grant even before we had these planning grants in place—called arts in the classroom. I went out to West Virginia and helped announce that in September 1988. That program had the support of both the education department and the division of arts and humanities which is run by a wonderful guy by the name of Norm Fagan, whom you may know.

Basically, that grant and that program are to get more artists into the schools in West Virginia, particularly the schools in the smaller towns, not just in Charleston and so forth, but in the smaller towns, to supplement the teachers who are there, to help the teachers in different aspects of the arts, and to make the arts a principal component of education.

At the time I was in West Virginia, Mr. Chairman, I made the point, and I would stick by it, that this Arts in the Classroom Program is one of the best in the country. I might add that the former chairman of the State Arts and Humanities Commission, Kay Goodwin, was on the advisory committee of our report, "Toward Civilization," and she was perhaps one of the two or three principal persons who made this West Virginia program come about.

So, if I may say so, your home State is showing great leadership in this area.

STATE ARTS IN EDUCATION GRANTS AND SPECIAL PROJECTS INITIATIVES

Chairman **Byrd**. As a separate program, the Endowment funds grants to support artist residencies. In your estimation, are there tradeoffs in this approach, as opposed to a focus on curriculum development?

Mr. **Hodsoll**. There are tradeoffs, but we believe the programs are complementary. First, I should state that the largest single part of the Arts in Education Program budget—we call it State Arts in Education Grants—remains assistance for the artist residency programs which we and the States pioneered, starting in the 1960's really, all through the history of the Endowment.

However, one of the problems is that only 5 percent of schools in this country have artists in residence, and so there is a gap there. And, second, even where there are artists in residence, they're often treated as an adjunct to relieve the teacher for an hour of consultation with other teachers and the like, and they're not treated as an integral part of the curriculum.

And so we feel, to make the artists more integral and to make the arts themselves, however taught—because there are lots of art and music teachers in the schools—more integral, we need—and this is what our new program does—essentially to develop first the planning and then the actual implementation of these approaches. The artists are very important to teaching the arts, but so are the teachers and they need to work together, Mr. Chairman.

Chairman **Byrd**. As a special project, the Endowment proposes to provide targeted funding of $300,000 for the development and dissemination of prototype arts and culture courses and teaching materials. What are the prototypes that the NEA intends to follow? Where did they originate? When were they developed? Have they been evaluated subsequent to their development?

Mr. **Hodsoll**. Well, the $300,000 is essentially to develop prototypes. They have not yet been tested. But the way in which we're going about this—and we already have a request for proposals in draft stage at the Endowment—is first to insist that the development of prototype arts courses be done not from the top down—

that is, in a university setting and later tried out in the schools—but be developed from the bottom up, that is in schools, so that we can see how the actual curriculum would work in a school setting. That doesn't mean that a university might not be involved. They should be involved because there is a great deal of expertise there. But ultimately it has to be worked through the school system.

Now, what are we talking about here? We're talking about three things essentially. There will be other things as time goes on, but at least for this fiscal year we're talking about three things.

First, the development of a course in all of the arts that could be taken in high school that would be at least a model—and there may be more than one model—for fulfilling the graduation requirements that 29 States now have in the arts.

HIGH SCHOOL GRADUATION REQUIREMENTS IN THE ARTS

Chairman Byrd. Is West Virginia one of those 29?

Mr. Hodsoll. I'd have to check that. I apologize, Mr. Chairman, I don't have that in my head. We'll get back to you for the record on that.

[The information follows:]

States with graduation requirements in the arts

State and subject	*Number*
Arkansas: [1] Drama, music, visual arts	½
California: Fine arts, (creative writing, dance, drama, music, visual arts) or foreign language	1
Connecticut: Arts (dance, drama, music, visual arts) or vocational education	1
Florida: [1] Fine arts (dance, drama, music, visual arts)	½
Georgia: Fine arts (dance, drama, music, visual arts), vocational education or computer technology	1
Hawaii: For academic honors only. Art or music	1
Idaho: Fine arts (creative writing, dance, drama, music, visual arts), foreign language or humanities	[2] 4
Illinois: Art, music, foreign language or vocational education	1
Indiana: For students seeking an honors diploma	2
Louisiana: For students in the Regents Program (typically, the college-bound)	½
Maine: Fine arts (visual arts, music, drama, or forensics	[2] 1
Maryland: [1] Fine arts (dance, drama, music, visual arts)	[2] 1
Missouri: [1] Music or visual arts	1
New Hampshire: [1] Arts education (art, music, visual arts, dance, drama)	½
New Jersey: Fine arts, practical arts or performing arts	1
New Mexico: Fine arts (visual arts, music, dance, drama), practical arts or vocational education	½
New York: [1] Dance, drama, music or visual arts	[3] 1
Nevada: Fine arts or humanities	[4] 1
North Carolina: For students enrolled in the Scholars Program	1
Oregon: Music, visual arts, foreign language or vocational education	1
Pennsylvania: Arts (dance, drama, music, visual arts) or humanities	2
Rhode Island: For college-bound students only. Dance, drama, music or visual arts	½
South Dakota: [1] Fine arts (dance, drama, music, visual arts)	½
Tennessee: For students seeking an honors diploma	2
Texas: For advanced academic program students only. Drama, music or visual arts	1
Utah: [1] Dance, drama, music, or visual arts	1½
Vermont: [1] General arts, dance, drama, music or visual arts	1
Virginia: Fine arts (art, music, dance, theatre) or practical arts	[2] 1

States with graduation requirements in the arts—Continued

State and subject	*Number*
West Virginia: Music, visual arts or applied arts	1

[1] States that require some study of the arts by every high school student.
[2] Effective 1988.
[3] Effective 1989.
[4] Effective 1992.

Note.—This table is a revision of one first published in "Arts, Education and the States: A Survey of State Education Policies" (Washington, DC: Council of Chief State School Officers, 1985), updated with information from the National Art Education Association: Alliance for Arts Education, the John F. Kennedy Center for the Performing Arts, and the National Assembly of State Arts Agencies.

Mr. HODSOLL. But in any event, as it stands now, the States that have these requirements don't have any real specificity as to what it takes to fulfill those requirements. A young person going to high school can fulfill the requirement by playing trumpet in the football band or taking a general music course, or an art course, or being in the play at the end of the school year.

It's a wide variety of things that give no assurance of ending up with young people having a degree of cultural literacy. So our hope is to see if we can create a menu, not just one course, but a menu of courses that States and local school districts could choose from, and test those courses with actual students so that they would have some sense of the evaluation which was implicit in your question, and then see whether or not they could move forward with it.

We feel that if one looks at arts education in schools today, it is essentially on the one hand art education—that's visual art education—and on the other hand music education. There is very little drama education, practically no dance education and, astonishingly, no media education and no design education.

We feel that if a person is to be culturally literate, he or she needs to have a sense of all of these things. There is a school district—there may be more than one—that has started in this direction—the LaMirada School District in southern California—where they basically have a course that has a bit of each of these subjects in it, and it's been highly successful. I'm not saying that's the model course, but it is a good example.

We need also to develop the other two areas that we're requesting the $300,000 for. Since there is essentially no agreed media arts curriculum in the schools today, we need to develop a media arts course that could be taught at middle school level. After all, television and film are the most pervasive purveyors of our culture, and precious few people know anything about them at all.

Chairman BYRD. What would media arts education entail?

Mr. HODSOLL. Well, it would entail having a sense of the art of film and of television. For example, just yesterday—I think some of your staff attended this— there was a recreation of the film Lawrence of Arabia. It had to be pieced back together again. That film is a work of art in my opinion, Mr. Chairman. It is put together by a variety of artists, visual artists in the photography of it, musical artists in the music that goes with it, dramatic artists obviously in the actors and so on. It is probably the most pervasive art form in our culture today, and only a small percentage of it is good, to be sure.

But understanding it, we feel, is an important part of understanding the arts in general. And there's no course that exists right now on this.

The final piece of the $300,000 is for the design arts. Design is everything man makes around us. This magnificent room, which was restored not so long ago, gives one a sense of the design arts even as we sit here. The way cities are put together by their mayors essentially is another aspect of the design arts.

Very little is taught about that, and yet young people in a very practical sense, when they graduate and become citizens, vote on bond issues that affect the way the streets go in a town, that affect the way zoning regulations are put together. But what sense do they get of that in their schooling? Very little.

And so we're trying to develop, again, a prototypical design arts course that would be taught in upper elementary grades. We feel that's a good place for that. Those three things are our first effort that we would ask the $300,000 for.

Chairman **Byrd**. How do you get the schools to take these on?

Mr. **Hodsoll**. Basically, once developed—and they will be developed in schools as I mentioned, as well as having outside help—we will then document these courses as they've been taught, the implementation of them, and the evaluation of what the students have in fact learned from being exposed to such a course.

And if it looks successful, then we will distribute those case studies around, use our advocacy, bully pulpit if you will, and move into the other side of our Arts Education Program. Let's say 2 or 3 years from now—I'll make this up now—we have a media course that looks good in the middle school, we will then circulate that to all of the State arts agencies, State departments of education, and suggest that this is something they might want to entertain.

And then when implementation grant applications come in, that would be a prime ingredient for trying to get the schools to go forward with these things. It will be of the nature of what I've just described.

ENDOWMENT FUNDING IN WEST VIRGINIA

Chairman **Byrd**. What percentage of the applications received were funded for the State of West Virginia?

Mr. **Hodsoll**. I think I can do that. Excuse me a minute.

It was 30.4 percent, Mr. Chairman, and the average for all States is 26.1 percent. The average of grants funded in relation to applications is 26 percent. So, since West Virginia was at 30 percent, you're doing a little better than the average.

Chairman **Byrd**. Would you submit your table?

Mr. **Hodsoll**. I will be happy to submit the table.

NATIONAL/REGIONAL IMPACT OF GRANTS FY87

State	Total NEA Funds FY87	Funds by State as % of NEA Total	Funds for National Projects	Funds for Regional Projects	Funds Net of Nat'l Regional	Net Funds as % of NEA Total	% U.S. Population 1986	% U.S. Artist Population 1980	# Applic.	# Grants	% of Total FY87 Applic.	Ratio FY87 Grants to Applic. Rec'd FY87
Alaska	$1,014.6	0.67%	$0.0	$32.0	$982.6	0.86%	0.2%	0.2%	75	33	0.44%	44.0%
Alabama	$701.6	0.46%	$0.0	$9.0	$692.6	0.61%	1.7%	1.1%	73	16	0.43%	21.9%
Arkansas	$646.8	0.42%	$0.0	$0.0	$646.8	0.57%	1.0%	0.5%	53	9	0.31%	17.0%
Am.Samoa	$251.4	0.17%	$0.0	$0.0	$251.4	0.22%	0.0%	-	4	3	0.02%	75.0%
Arizona	$1,547.8	1.02%	$93.3	$67.8	$1,386.7	1.22%	1.4%	1.3%	184	47	1.08%	25.5%
California	$14,540.0	9.55%	$1,917.2	$247.6	$12,375.2	10.89%	11.2%	16.2%	2578	546	15.11%	21.2%
N.Marianas	$214.8	0.14%	$0.0	$0.0	$214.8	0.19%	0.0%	-	3	2	0.02%	66.7%
Colorado	$1,714.2	1.13%	$92.1	$182.3	$1,439.8	1.27%	1.4%	1.7%	215	48	1.26%	22.3%
Connecticut	$5,045.4	3.31%	$329.1	$38.8	$4,677.5	4.12%	1.3%	1.6%	282	81	1.65%	28.7%
Dist.of Col.	$6,091.1	4.00%	$4,065.7	$107.7	$1,917.7	1.69%	0.3%	0.1%	391	146	2.29%	37.3%
Delaware	$488.3	0.32%	$65.9	$0.0	$422.4	0.37%	0.3%	0.2%	29	10	0.17%	34.5%
Florida	$1,614.3	1.06%	$47.5	$0.0	$1,566.8	1.38%	4.8%	4.4%	288	47	1.69%	16.3%
Georgia	$2,347.2	1.54%	$56.9	$1,101.1	$1,189.2	1.05%	2.5%	1.9%	187	73	1.10%	39.0%
Guam	$287.8	0.19%	$0.0	$0.0	$287.8	0.25%	0.0%	-	10	5	0.06%	50.0%
Hawaii	$1,524.1	1.00%	$7.1	$198.0	$1,319.0	1.16%	0.4%	0.6%	66	26	0.39%	39.4%
Iowa	$829.4	0.54%	$22.0	$10.0	$797.4	0.70%	1.2%	0.9%	89	25	0.52%	28.1%
Idaho	$559.7	0.37%	$84.3	$0.0	$475.4	0.42%	0.4%	0.3%	30	14	0.18%	46.7%
Illinois	$4,908.2	3.22%	$701.4	$76.0	$4,130.8	3.64%	4.8%	4.6%	702	180	4.12%	25.6%
Indiana	$1,197.6	0.79%	$50.0	$0.0	$1,147.6	1.01%	2.3%	1.6%	135	31	0.79%	23.0%
Kansas	$939.0	0.62%	$48.5	$0.0	$890.5	0.78%	1.0%	0.9%	58	20	0.34%	34.5%
Kentucky	$1,671.9	1.10%	$60.0	$122.5	$1,489.4	1.31%	1.5%	1.0%	100	29	0.59%	29.0%
Louisiana	$1,160.1	0.76%	$35.0	$9.0	$1,116.1	0.98%	1.9%	1.2%	131	37	0.77%	28.2%
Massachusetts	$6,191.2	4.07%	$1,037.9	$538.4	$4,614.9	4.06%	2.4%	3.0%	946	235	5.55%	24.8%
Maryland	$2,718.5	1.79%	$253.9	$624.7	$1,839.9	1.62%	1.9%	1.9%	294	57	1.72%	19.4%
Maine	$870.2	0.57%	$0.0	$23.7	$846.5	0.74%	0.5%	0.3%	111	29	0.65%	26.1%
Michigan	$1,582.2	1.04%	$48.0	$21.0	$1,513.2	1.33%	3.8%	3.4%	244	61	1.43%	25.0%
Minnesota	$6,395.1	4.20%	$948.7	$1,241.5	$4,204.9	3.70%	1.7%	1.8%	338	126	1.98%	37.3%
Missouri	$2,279.4	1.50%	$225.7	$555.0	$1,498.7	1.32%	2.1%	1.7%	214	64	1.25%	29.9%
Mississippi	$613.3	0.40%	$0.0	$3.0	$610.3	0.54%	1.1%	0.6%	27	9	0.16%	33.3%
Montana	$662.0	0.43%	$0.0	$9.3	$652.7	0.57%	0.3%	0.2%	66	17	0.39%	25.3%
North Carolina	$2,451.1	1.61%	$222.7	$165.0	$2,063.4	1.82%	2.6%	2.0%	220	57	1.29%	25.9%
North Dakota	$448.9	0.29%	$0.0	$0.0	$448.9	0.40%	0.3%	0.1%	22	8	0.13%	36.4%
Nebraska	$955.3	0.63%	$4.2	$18.0	$933.1	0.82%	0.7%	0.5%	62	20	0.36%	32.3%
New Hampshire	$764.4	0.50%	$75.3	$0.0	$689.1	0.61%	0.4%	0.3%	80	22	0.47%	27.5%

NATIONAL/REGIONAL IMPACT OF GRANTS FY87

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New Jersey	$2,134.8	1.40%	$168.5	$18.5	$1,947.8	1.71%	3.2%	3.4%	373	74	2.19%	19.8%
New Mexico	$3,440.2	2.26%	$34.0	$1,078.8	$2,327.4	2.05%	0.6%	0.6%	241	76	1.41%	31.5%
Nevada	$404.7	0.27%	$0.0	$0.0	$404.7	0.36%	0.4%	0.6%	17	5	0.10%	29.4%
New York	$37,498.3	24.63%	$16,289.8	$623.1	$20,585.4	18.11%	7.4%	12.7%	4823	1293	28.27%	26.8%
Ohio	$5,029.0	3.30%	$123.1	$92.0	$4,813.9	4.24%	4.5%	3.7%	344	96	2.02%	27.9%
Oklahoma	$683.3	0.45%	$9.3	$50.0	$624.0	0.55%	1.4%	0.9%	60	14	0.35%	23.3%
Oregon	$1,151.3	0.76%	$47.0	$0.0	$1,104.3	0.97%	1.1%	1.2%	213	44	1.25%	20.7%
Pennsylvania	$6,485.3	4.26%	$1,074.6	$112.6	$5,298.1	4.66%	4.9%	4.0%	615	188	3.61%	30.6%
Puerto Rico	$727.1	0.48%	$0.0	$18.0	$709.1	0.62%	0.0%	-	44	23	0.26%	52.3%
Rhode Island	$1,049.7	0.69%	$34.0	$0.0	$1,015.7	0.89%	0.4%	0.4%	80	22	0.47%	27.5%
South Carolina	$1,769.6	1.16%	$507.7	$56.0	$1,205.9	1.06%	1.4%	0.9%	93	29	0.55%	31.2%
South Dakota	$498.7	0.33%	$0.0	$5.5	$493.2	0.43%	0.3%	0.2%	30	11	0.18%	36.7%
Tennessee	$1,149.6	0.75%	$31.4	$40.2	$1,078.0	0.95%	2.0%	1.6%	108	29	0.63%	26.9%
Texas	$4,178.7	2.74%	$240.9	$174.3	$3,763.5	3.31%	6.9%	5.7%	570	142	3.34%	24.9%
Utah	$948.2	0.62%	$151.6	$184.9	$611.7	0.54%	0.7%	0.5%	101	25	0.59%	24.8%
Virginia	$2,361.1	1.55%	$847.0	$21.5	$1,492.6	1.31%	2.4%	2.3%	297	53	1.74%	17.8%
Virgin Islands	$230.2	0.15%	$0.0	$9.6	$220.6	0.19%	0.0%	-	9	5	0.05%	55.6%
Vermont	$735.2	0.48%	$9.6	$10.0	$715.6	0.63%	0.2%	0.2%	111	31	0.65%	27.9%
Washington	$3,120.9	2.05%	$156.2	$15.5	$2,949.2	2.60%	1.9%	2.1%	307	70	1.80%	22.8%
Wisconsin	$2,367.2	1.55%	$394.6	$5.0	$1,967.6	1.73%	2.0%	1.7%	188	50	1.10%	26.6%
West Virginia	$609.4	0.40%	$105.0	$0.0	$504.4	0.44%	0.8%	0.4%	46	14	0.27%	30.4%
Wyoming	$475.1	0.31%	$3.5	$0.0	$471.6	0.42%	0.2%	0.3%	35	14	0.21%	40.0%
TOTAL	$152,274.5	100.00%	$30,720.2	$7,916.9	$113,637.4	100.00%	100.0%	99.3%	17,012	4,441	99.72%	26.1%
FO Americans Ab	$27.3		$5.0	$0.0					47	5		10.6%
Total + FO	$152,301.8 *		$30,725.2	$7,916.9					17,059	4,446		26.1%

* $124,901.6 FY87 Program + Treasury Funds
27,400.2 Challenge Grants announced Sept. 1987

$152,301.8

Policy and Planning Office
04/15/88

EXPANSION ARTS

Chairman **Byrd**. Under the Expansion Arts, the Expansion Arts Program includes special project support initiatives to benefit rural arts organizations. I am told that the organizational development project provides funds to assist with institutional development. These funds are important to those organizations as they seek to establish themselves more firmly in the communities.

The budget over the last few years shows a decrease in the funding provided for special projects. The fiscal year 1990 proposal is $100,000 less than fiscal year 1989.

Would you like to comment?

Mr. **Hodsoll**. Do you want to comment on the specifics of that?

Mr. **Southern**. There are various components, sir, of special projects which includes the Community Foundation initiative which has been set up to induce community foundations to set aside endowments for the first time for the use of minority and emerging arts organizations.

That program has been drawing down substantial amounts every year, but fewer foundations are now coming into it than at an earlier stage. So the need for funds to support that part of special projects is diminished.

At the same time in special projects are two other functions. One is the organizational development pilot which was a trial project a year ago to assist some dance companies that were of high artistic quality to develop and strengthen their management. That was an experimental project that may be carried over later in other endowment programs, but for the time being the $100,000 that were used for that is not needed in the current year or in fiscal year 1990.

RURAL ARTS INITIATIVE

Finally under special projects is—and this is a separate program—the new rural arts initiative which are grants made through State arts agencies to assist them in strengthening within their States, rural arts organizations of the highest quality and ingenuity. And that will be taking initially $200,000, or perhaps a little more, for six States at the rate of $40,000 a year over a 2-year period.

Chairman **Byrd**. How many applications did you receive in the rural arts initiative in fiscal year 1989?

Mr. **Southern**. We will have to supply that for the record. I think it is about 15, and we see seven or eight well-qualified applicants, and we made six or seven grants.

[The information follows:]

Rural Arts Initiative Applicants

Alabama State Council on the Arts; Alaska State Council on the Arts; American Samoa Council on Culture, Arts and Humanities; California Arts Council; Florida Department of State; Iowa Arts Council; Louisiana Department of Culture and Recreation; New Mexico Arts Division; North Dakota Council on the Arts; Ohio Arts Council; State Arts Council of Oklahoma; South Carolina Arts Commission; Utah Arts Council; and Wisconsin Arts Board.

RURAL ARTS INITIATIVE

Chairman BYRD. How many projects received funding?

Mr. SOUTHERN. I think none have yet received funding, sir, but some will shortly be receiving funding in the first year which is this coming fiscal year.

Mr. HODSOLL. We expect about six or seven in the Rural Arts Initiative Program. We've allocated $240,000 a year for that over the next 3 years, and that will increase because the $240,000 is for six projects at $40,000 each. And then we anticipate after the first year, if all goes well, bringing some others in, so there will be a balloon, if you will, of funding, and we hope to have somewhere between a dozen and two dozen of these over the next several years.

Chairman BYRD. Tell us about the rural arts initiative.

Mr. HODSOLL. I certainly will. Basically, the program began about 4 years ago when we discovered, as we might well have discovered, that there were particular problems in the smaller towns, that geographic distance added a difference in terms of people in the smaller towns being able to have access to a variety of the arts beyond what was available in the town itself.

We then set aside $200,000. I'm giving you a little history because it's an evolution, Mr. Chairman. We then set aside $200,000 in our State program budget, feeling that the States could help us identify specific means for addressing these issues, and we did indeed address this.

We made a grant to the Southern Arts Federation to reach out to all of the southern States, and we had another grant that went, I believe, to the State of Idaho, to help them engage a process in the smaller towns there.

However, it was unsatisfactory, I would be the first to acknowledge. We didn't have a raft of applications coming in. We didn't know quite how to establish the networks that could build the communication with some of these smaller towns or even galvanize some of the State arts agencies who, a little like us, probably pay—not all of them, but some of them pay more attention to the larger concentrations of the population than the smaller concentrations.

And so we then funded—this is the next step—a conference through the national assembly of local arts agencies which took place 2 years ago in Oregon, to get people—we specifically invited people from smaller towns from all over the country—to come up with ideas. And at that meeting, a number of ideas emerged and it became clear to us that we couldn't simply sit in Washington and expect applications to flow in, that that would be rather haphazard, and that what we had to do was to get one of our staff members to get on the road with a little bit of money and essentially go out and talk to people in smaller towns and in the more rural States.

And that is precisely where the expansion arts project comes from. A.B. Spellman is already out on the road. I've increased his travel budget so he can go to more places, because ultimately I think, Mr. Chairman—I don't know, but I think—we're going to have to basically work up projects with people, to expand their imaginations, person to person, a little like arts education, so that we can have some prototypes that other people can say, hey, I want to do that too.

And that's what we are doing right now and that's where the rural arts initiative is that's why I can't give you the six places where it will happen. But we hope that these six places will be geographically dispersed, that they will set models for the future.

Chairman BYRD. All right.

In Sophia, WV, you're putting your person on the road to come down and see me. What's he going to tell me? What is in this that interests me? What's he going to try to sell me? What's he going to try to persuade me on? What is the objective of the rural arts initiative?

Mr. HODSOLL. The objective, sir, is where the local community wants it—and there are some local communities that don't want it, so that's their choice—local community will be able to tap into our sources in order to achieve the following: first of all, an assessment of what they have in the local community; and then an assessment of what is realistic to bring in in the form of touring, whether it be in the performing arts or exhibitions of arts, and we will have the information for that.

After sitting down and working through that process, then basically there will be funding opportunities to help implement it.

Let me give you an example of a very special project in Tifton, GA that I personally am aware of because I've been down there. It's a very rural area in the southwestern part of Georgia, just north of Tallahassee.

There are five counties down there, and this happened back in the 1970's, before my time. Somebody from the Endowment went down there—there was an interest that had been expressed, it was somewhat by serendipity that we learned about it—and basically helped them talk through a process that has now resulted in the Savannah orchestra going to Tifton. That had never happened before. It has resulted in a new theater in one of the—I've forgotten all of the county names, but one of the counties that's associated with this, not Tifton itself. And the end result has been not only an increase in the variety of art that is available to the people of that five-county area, but also a great deal of civic pride in the fact that these small agricultural communities in southwestern Georgia have been able to develop a real cultural life for themselves.

Now, I'm going to take another town to show you the other side of the coin, if I may, Mr. Chairman. I will leave the name of this town unmentioned. It's in a Western State is all I will say. I went to visit them.

Again from almost when I came into the Endowment 7 years ago, I've been interested in this and I've visited a lot of small towns. I try to pick them to get a sense of what's realistic.

I went to this small town in this Western State. We had dinner at the diner on the interstate, which was the only restaurant in town and basically I have to tell you this, that at the end of the dinner, we all agreed that this town didn't really want more art. They were quite happy just staying the way they were. So you have to ferret that out too.

The problem is that in many of these small towns where you really do have an interest in increasing the cultural life for the community—and we had explorations with the Department of Agriculture a few years ago to use the Agricultural Extension Service for this—the problem is, coming back to it, is that there are a wide variety of smaller towns across this country who do want to do something more in the cultural area and have no idea how to do that.

Now, we at the Federal level can't gain a sense of all of that. We have to work through the States and the regions on it, but I really think we do have to work at this, because we're responsible not just to the people in the big cities. We're responsible also for trying to help these other areas, and what we really need to do—at least this is my idea, for what it's worth at this point—is to develop more Tiftons, and I suspect they're all going to be different around the country, where they can demonstrate—it would be their choice—that this is possible.

RURAL OUTREACH

Chairman **BYRD**. How do you work through a State like West Virginia, for example, which is a very rural State, to engender this kind of interest and to find out what locales would be interested and whether there is real potential?

Mr. **HODSOLL**. Well, we've had a very good relationship with Norm Fagan and Jim Andrews, who has been the Director of the West Virginia State Arts Council. He's retired now. But we've had a very good relationship with the West Virginia Council on the Arts and Humanities. We've talked with them about this. I don't believe they have specifically been with us on this.

Ms. **HIRSCH**. Not at this point.

Mr. **HODSOLL**. Not yet.

But I can remember—actually this was when Jay Rockefeller was Governor of West Virginia—sitting in the Governor's mansion, talking with a number of people about just this. There were people from Huntington, Elkins—is that it, I'm sorry, this is memory now—and a couple of other places. And I confess we had a very good conversation. There were needs, and I think there were a few applications that came in, but in terms of a generic approach to it, nothing happened at that point.

But that's how we would do it. In West Virginia, we would sit down with the State Arts Council in the first instance and ask them, where is this possible?

Chairman **BYRD**. And when would you do that?

Mr. **HODSOLL**. We can do it anytime. I'd be happy to do it. I'll put it on the record. We'll go visit.

Chairman **BYRD**. Were any applications submitted by West Virginia out of the 14 or 15 you say that have applied?

Mr. **SOUTHERN**. Not in this round, sir.

Mr. **HODSOLL**. I don't believe so at this point.

Chairman **BYRD**. Well, I don't want to monopolize the questioning any more than I have already.

First of all, let me say that I've been on the Appropriations Committee now over 31 years, and for 22 years I've been in the leadership, one office or another, and I haven't been able to give my time as perhaps others have on the Appropriations Committee.

So my questions will be for the purpose of, in many instances, bringing me up hopefully to somewhere near the level of some of the other members who have been able to attend more than I have. So I'll continue my questioning afterward.

Senator McClure, do you have anything you would like to ask now?

Senator McClure. Thank you very much, Mr. Chairman. I very much appreciate the line of questions which you were undertaking because they parallel some of the concerns that I have had.

I will attempt not to repeat the questions you've already asked. I think Mr. Hodsoll has already given an adequate explanation of what they intend to do in some of the areas where it is very difficult to stimulate or to ferret out what needs only development.

PRIVATE SECTOR SUPPORT FOR THE ARTS

According to the American Association of Fund-Raising, the private sector has doubled their contributions to cultural activities between 1980 and 1987 to $6.4 billion. In addition, contributions increased 10 percent from 1986 to 1987.

Has most of the growth come from corporations or from individuals?

Mr. Hodsoll. Well, in the last year, Senator McClure, most of the growth has come from individuals and foundations. Actually, corporate giving leveled off in the last year; however, one should note that if one looks back to 1980, which is the point from which we see this doubling in private philanthropy for the arts and humanities, that corporate giving has experienced the fastest rate of growth until this last year. So they've done very well in many ways by the arts.

Senator McClure. Have these contributions been analyzed for geographic distribution?

Mr. Hodsoll. No, sir; maybe we should do that.

Senator McClure. I'm not sure what it would tell us, except perhaps a better understanding of the relationship between geographic distribution in giving and any potential geographic bias in the distribution of the proceeds.

Mr. Hodsoll. I would assume—and now I'm guessing—that the bulk of the giving takes place in the urban areas which is where the larger institutions are who need more money and also the corporate headquarters of the wealthier contributors and the like.

Senator McClure. And where the current programs already exist.

EFFECT OF THE TAX REFORM ACT OF 1986

Mr. Hodsoll. Where the existing programs are already in being; that is true. I am sure that is the case.

Senator McClure. Is it still too early to examine the impact that the 1986 Tax Reform Act had on charitable giving, especially the reduced marginal rates and the change in deductibility of appreciated property for some taxpayers?

Mr. Hodsoll. It is too early, but let me, if I may, Senator McClure, give you a brief indication of what I do know and tell you when I will know more.

First of all, on what I do know. 1987, of course, is the first year and the Tax Reform Act was not completely implemented, as you know, in 1987. But in the first year, if one looks at all philanthropy, because this is the only way you can measure, not just the arts and humanities, in fact, all philanthropy increased at a rate higher than the rate of inflation, and effectively, also at a higher rate than in the previous year. So we see no effect, in terms of overall philanthropy, in relation to the Tax Reform Act as it came into being, at least through 1987.

Now to appreciated property. There, the only information that we have so far is information that was supplied from a survey of 170 art museums by the Association of Art Museum Directors. We have the numbers for 1985, 1986, and 1987. What I am about to describe is the trend in those 3 years of the value of art work donated to museums—one can assume that much of it was appreciated property.

In 1985, it was here; in 1986, it was there; in 1987, it was there. If you go from 1985 to 1987, it is still up, but there is a drop from 1986 to 1987. And I stated in the House hearings on this, and so let me state here as well, if I may, that I think we have to take a very close look at the 1988 numbers in this series, which I expect will be available, at least in preliminary form, in the spring of this year, to see whether 1988 is a continuing downward trend or whether it goes back up or stays flat.

If it is a continuing downward trend, I think—and I have stated this, I might say, within the new administration as well—we have to take another look at the appreciated property tax rules to see on the balance of tax interests whether this is where we want to stay.

Senator McCLURE. I will look forward to any other information you can provide for us. Will we have any of that in the next few months or is it——

Mr. HODSOLL. Yes; I suspect you will have it before you go to markup. I hope that we will have some of this, you know, in April, somewhere in there, but we're not producing these numbers, so it will be somewhere in there.

STATE OF THE ARTS REPORT

Senator McCLURE. In October of 1988, the first in a series of biennial reports on the state of the arts was completed. This report, entitled "The Arts in America," describes key elements of strength and weakness in each of the fields and presents a research agenda for the future.

Can you elaborate on this research agenda, focusing on the costs and how you recommend that it be funded?

Mr. HODSOLL. Yes, sir; thank you. Well, as you know, in the 1985 reauthorization, we were instructed—the Congress instructed us to produce a "Biennial State of the Arts Report" and to produce—more or less these are the words—a practical system that was not too costly for basic collection. [Laughter.]

We have completed the report, as you point out. We are having a research advisory group convene with us at the Endowment next month. It is our purpose there to go over our existing research activities and needs in research that are identified in the appendix of the "State of the Arts Report" to see what makes the most sense. At that point, Senator McClure, we will be able to get back to you as to whether this can all be absorbed within our existing research budget—not out of other programs for this purpose, but within our existing research budget—or whether there may be a need for some additional funding for this purpose.

Let me state, however, that, at least from my perspective, I don't anticipate any major additional funding. I think that, given the budget constraints and everything else, we should try to pick a few important indicators of the strength of the arts, their financing, et cetera, and track those over time and not try to be too comprehensive, just to give us a sense, because today there is no arts information system. And, indeed, another report that we produced last year of the existing information that is available, would show you that, unlike in most other areas, there is very little basic information on the basis of which to say at the Endowment or for this committee to say there is more need here than there, and we should shift resources. We do this, you know, somewhat by the seat of the pants, and I think we need a little bit more information.

WHAT CONSTITUTES BASIC ARTS EDUCATION

Senator McClure. The chairman went into some detail and the recommendations that evolved because the analysis entitled "Toward Civilization," which was completed last March. One of the proposals suggested that 15 percent of the school week or year be allotted to the arts in elementary, middle and junior high, and that the equivalent of 2 full years be allotted in high school.

Your recent report to the Congress, "The Arts in America," indicated that "basic arts education does not exist today."

I understand that your statement is very broad and that it is difficult to pin down—on a national level—exactly how much arts education children are receiving.

I am curious, however, about whether or not there is an inconsistency between the assumptions made in "The Arts in America" that, and I quote, "basic arts education does not exist today," and the assumption in "Toward Civilization" that arts education does exist but needs to be increased?

Mr. Hodsoll. I can understand how that is confusing as one reads the words. First of all, by basic arts education we mean something that really isn't happening anywhere that we are aware of in the schools. What do we mean by "basic arts education?" We mean an arts education that would be available to, and in limited doses, required of every student going through elementary, middle, junior high and high school, the end result of which would have those young people essentially culturally literate, particularly in the wide variety of art that exists outside the popular culture, the popular culture being there for everybody all the time. And by that wide variety of art, I mean basically all of our cultural heritage and most of contemporary expression.

As far as I am aware, there is no set of courses, set of requirements, set of options in any school district in the United States. There may be one out there, but our survey to date has not found one—in which there is some degree of assurance that this cultural literacy objective would be achieved in the same way that every school at high school level has a U.S. history course. Whether it is taught right or not right is another issue, but at least it is there. The purpose of that U.S. history course, at least in part, is to have every student graduate from high school with some literacy and some understanding of the Constitution of the United States and the nature of the development of the United States, so they can be good citizens. We feel that cultural literacy is also important to good citizenship, and we don't feel that that exists now.

Back to the other point, which is the 15 percent.

Chairman BYRD. May I interrupt?

Mr. HODSOLL. Yes, sir.

Chairman BYRD. Two things. I think the Endowment for the Humanities with its future—your statement of facts with respect to the teaching of history in these schools. Second, what constitutes the basic arts education that you were just talking about?

Mr. HODSOLL. First of all, what exists out there now, Mr. Chairman, is a wide variety of things—the odd music course, the odd dance course, the odd art course, visual art course, and so on. What I would like to see, and it is the burden, essentially, of what we set out in "Toward Civilization," is a collection of courses available to students that would result in them having a basic sense of all of these arts.

What does basic mean? Well, to me, it means something similar to what young people are supposed to get out of history—whether they get it or not, I'd leave aside—which is that they will be able to recognize the different art works, that they will have a sense of what is good and bad that they will have a sense of the process that went into creating those works, and if they themselves want to, they will have a sense of how themselves to create art work or to play the violin or whatever it may be. They should have the same general sense of that as they do of biology a sense of photosynthesis, a sense of biological development, and so on and so forth, and as they do of differential equations in math, et cetera.

Now if I could just mention, there are lots of resources in the schools to this end, mostly art and music teachers. There are as many art and music teachers in the schools today as there are science teachers of all disciplines. Now, the people on the science side might say, "That's terrible. We need more science and leave the arts where they are." I am not suggesting more teachers or more resources, though it is interesting to note that the Department of Education survey on this shows that resources and time in the school day for the arts have been increasing over the last 8 years as a part of educational reform. That surely wasn't clear to me when we started this study, but that is a fact. It is a valid statistical fact as far as I know.

Now what we are suggesting—and I am going to try and square the circle here, if I may, Mr. Chairman—is that we need to take those resources—kids are already spending 15 percent of the school day in elementary school and 17 percent of the school year in junior high school on the arts—we need to take that existing time, those existing teachers and encourage the schools, because they are going to have to decide, not our deciding, encourage the schools to make use of those resources in a way that will result in their kids ending with a degree of cultural literacy.

If cultural literacy is the end goal in terms of learning outcomes, and the means for achieving cultural literacy is in part basic arts education—and I might add, basic humanities education, I don't want to put it all on the arts side—but if that is ultimately the goal, however it may be in U.S. history for the moment, if that is ultimately the goal, that doesn't exist in the United States. What I want to try to find, and I think the Endowment should try to help with the Department of Education, are ways to galvanize the existing resources in a way that they achieve an end result, as opposed to the way it is now.

And I will now state something that is a little flamboyant for me. In general, and I say this out on the public stump—no one has thrown a bomb at me and most people come up and say we agree—arts education is today recess, it is a hobby. I think it should be more than that.

I don't think we have enough resources for our schools to simply have all that money spent on recess. I think we need to take the resources that we have and move our young people toward being culturally literate. That is what I am trying to do.

Senator McClure. Well, that helps a little.

Chairman Byrd. But I still don't know what a basic arts education is.

Senator McClure. Well, I'm suggesting maybe he doesn't either, but we are going to find out.

Mr. Hodsoll. OK.

Senator McClure. And we're going to develop that together.

Mr. Hodsoll. We are.

Senator McClure. As I understand, in one of the proposals in "Toward Civilization" you suggest that 15 percent of the school week or year be allotted, to the arts in school; however, if I understood your last comment, that's already being done.

Mr. Hodsoll. Yes.

Senator McClure. Fifteen percent or seventeen percent.

Mr. Hodsoll. Yes, sir.

Senator McClure. So it is not an increased amount of time; it is a restructuring of how that time is used. Am I correct?

Mr. Hodsoll. Yes, sir.

DISTRIBUTION OF ARTS IN EDUCATION PROGRAM FUNDS

Senator McClure. That didn't come through to me clearly in reading the report, but it does in these exchanges.

Now, how do you plan for the distribution of the grants in the arts education program between suburban, rural and urban school districts?

Mr. Hodsoll. Well, in terms of our basic program of State art education grants, basically, a grant goes out to every State's arts agency, primarily, as it has in the past, to fund artist residencies in schools. That will continue to be the biggest chunk of money.

In terms of the arts in school basic education grants and our special projects grants, what we are looking for there, and we hope that every State will be in this before we are done, is States that are willing to move forward, and communities and local school districts that are willing to move forward, and effectively to chart the path for the rest, so we have, effectively, some models.

Senator McCLURE. Aren't you likely to find that the ones that are most ready to move in that direction are the ones who already have the most?

Mr. HODSOLL. No; I don't think so. If I may, just to give you an example. South Carolina, in my view, is the furthest along of all. South Carolina doesn't—I don't now where it ranks today, but it has until recently ranked very low, in terms of general expenses on behalf of education in general and on arts education, specifically. South Carolina, because of leadership, because of commitment, because of agreement on basic principles—is moving forward in an extraordinary way involving every school district in the State, including all those rural school districts. There are no big towns in South Carolina, and it's extraordinary what they're doing.

I was just mentioning, Senator McClure, to the chairman that in West Virginia, the schools program that we helped them get launched there is moving forward. I don't know what the figures are with regard to West Virginia education, but I don't think it's high. Interestingly enough, the bigger States, New York, California, et cetera—not Texas; Texas is moving forward—are much slower at this. Of course, the bigger States have got huge systems to move in this. They have lots of arts resources in the aggregate, leaving aside per capita figures. They have lots of resources, but they are slower in moving forward than is the case in some of the smaller States.

So my bet would be that we will see a number of the smaller States maybe even setting the agenda for the future, because they can move faster.

Just one other point. With regard to the add on, the $500,000 of the $1 million add on, where we say we want to find 10 school districts around the country where that we can test in schools new curricula of the kind that are mentioned in there, where we hope to be able to demonstrate elementary to middle to high school sequential education in the arts, my view is that we should select those so as to have urban, suburban, rural, east, west, north, south examples, so that we can get a collection of examples that are relevant for the country as a whole.

Senator McCLURE. Thank you very much. I'll submit the balance of my questions in writing.

Senator DOMENICI. Thank you very much. I won't take very long. Let me just say to the chairman and ranking member that I am pleased to be the newest member of this subcommittee. I have been around the Senate awhile, but I haven't had the privilege of being on this subcommittee.

Chairman BYRD. We welcome you to this subcommittee, and we know that you will bring much by way of talent and hard work to it.

Senator DOMENICI. Thank you very much. Well, I'll try.

Let me just make sure that you know that I am aware of New Mexico's rather significant involvement in the arts. I am not so sure my friends on the subcommittee know, but the city of Santa Fe is the third ranking city in the United States, if you measure art in the context of the marketplace. We are third behind New York and Los Angeles as the arts sales center in the United States, and that has to bring with it a great deal of creative activity, as you may be aware of. New Mexico is a very significant, energetic State when it comes to the arts. We do appreciate the various involvements that you have had in New Mexico through your Endowment, and we look forward to even greater collaboration.

Might I also say to the subcommittee on a personal note. Some of you know about my children, I have a lot of them. I have eight. They have been to all kinds of universities, and interestingly enough, Mr. Chairman, two of them have chosen the history of art as their major, one at Georgetown and one at the University of Virginia. I have no idea why they made such a choice. [Laughter.]

They certainly don't get it from their father. Perhaps it's rather exciting to them, and I am very pleased and proud of them. So they will be tutoring me, particularly the mother of four children in Albuquerque, who is a history of arts major. My daughter is very interested in how we better educate, and mobilize our resources to educate, our young students in both the performing arts and art.

ARTS IN EDUCATION IN THE UNITED STATES VERSUS OTHER COUNTRIES

Let me ask this, however. To stay on the subject of education for a moment, you've done your evaluation "Toward Civilization." In areas such as science and math, it is pretty easy to objectively survey where American students are vis-a-vis Japanese, Germans, and the like. Is it fair to say that there are no easy criteria by which to measure the state of education in the arts for American students versus others in the world, or not?

Mr. HODSOLL. Well, Senator, that is a truly profound question. First of all, I think it is fair to say that we have no adequate way of measuring this in a detailed sense; however, if I may tell you what I know, and you can easily spot deficiencies in what I am about to say. What I know is this.

In terms of the inputs to arts education, the Japanese are way ahead of us in terms of the amount of money and time and required courses that they have. And interestingly enough, and I have been to Japan on this subject, I talked with the Deputy Minister of Education there as well as their cultural agency, the Bunka Cho.

Senator DOMENICI. What does an input mean?

Mr. HODSOLL. Well, by input, I mean hours in the school day, numbers of teachers, numbers of required courses. What I can't tell you, and this is really the bottom line, is what the kids get out of all of that at the end of it.

However, let me just say this. The reason for the extensive amount of arts education in the Japanese schools—incidentally an educational system designed by Americans after World War II, and the Japanese will tell you that the reason first—and that is why I come to these outcomes rather than the specific inputs that are necessary to get you to the outcomes—that every Japanese child will have a sense of Japanese culture and will be literate in it.

The second outcome that they want from this is that every Japanese child will have a sense of the broad nature and variety of cultures of other countries, particularly Western Europe and America as a part of their being able to deal with those other cultures, and that is implicit in what they do.

Third, they want every child to have a sense of the problem-solving process that is inherent in the arts. If you can start with a blank sheet of paper and make something come out that has a cohesive whole, whether it is writing a poem or drawing a picture or doing a composition, or if you can take a trumpet and make the notes come out right, the discipline inherent in all of those processes, the Japanese feel, are the kind of discipline and inventiveness that will lead to productivity later on.

All of these reasons are inherent in what the Japanese are doing. We are a very different country and wouldn't want to do it the way the Japanese do it—that would be inappropriate as they are a much more homogeneous kind of country and we have much more variety I would suggest that all of those reasons, nonetheless, not the way they do it, are pertinent and appropriate and proper objectives for this country.

Senator DOMENICI. So you think you have at least a basic way of measuring the health of arts education in the United States and the health of arts literacy education among our students, and you say on both, we are not doing very well, is that correct?

Mr. HODSOLL. That is my view, without comparing to the Japanese. No question. I don't think we do it very well, and the reason I don't think we do it very well is, we put in lots of resources, as I mentioned, as many art and music teachers as science teachers, but in many, many too many cases, in the vast majority of cases, I would say, arts education is treated largely as recess.

DISTRIBUTION OF ENDOWMENT FUNDS

Senator DOMENICI. On your endowment program, you've been at it how long now—the agency's been at it how long?

Mr. HODSOLL. The agency's been at it for 23 years, and I've been at it for 7.

Senator DOMENICI. Have you found anything out there in the last 7 years that significantly changed your approach on how to better use the money Congress appropriates, or are you still making grants much the same way you did it 3 years ago, 5 years ago or 10 years ago?

Mr. HODSOLL. Well, starting with the last part of your question, the answer is, yes, we are still doing it largely in the same way that we have always done it, with a few significant changes, but if you take the bulk of it, we are doing it largely in the same way. I think the agency, in my opinion after 7 years, generally works pretty well, and having been with a lot of other Federal agencies, I am proud of this one. I don't take the credit for this. It was there before I got there 7 years ago.

I think we start from a pretty good plank, but I would say this. I think that in the future the agency, and this is going to be very hard with a flat budget—it is terribly difficult, as certainly this committee knows, to take money from one place and put it in another place, even if the other place is a more effective place to put the money; it is much easier to add on a bit of money; you know that as well as I do, for sure.

However, having said that, let me just say that I think that we have to put more attention and more funds into what I call the demand side of the arts equation. Now what do I mean by that? This agency—like the National Science Foundation, like the National Endowment for the Humanities, I am very wary of even mentioning it, because we have the distinguished Chairman of the Humanities Endowment here, and she may disagree with what I am going to say—but my perception is that these three agencies—science, humanities, and arts—put the bulk of their money, and it is certainly true of the arts, into what I call the supply side. The supply side is, to help the professionals in the field to develop their talents—in the case of the arts, to produce the product of their talents, to sustain, the great institutions that deal with the arts, to sustain the research activities of those institutions—research exists in the arts as well as in the sciences and in the humanities. That is where the bulk of our money goes, traditionally. And I think that is quite appropriate. I am not arguing that.

However, I think we also have another mission and that is to the demand side. In the case of the arts now, I am speaking of, what the arts mean to people? What ultimately do people, the American citizens—they pay the taxes that we use—want from their support of the arts? What is the public interest in the arts? While I think it is very much in the interest of the American people, just as in the National Science Foundation, to support professional activity and research, I think it is equally important to the American people, and if you would ask them, they might say it is more important, to make the best in the arts more a part of their lives, in the case of the arts outside of the popular culture more a part of their lives.

Now how do you do that? You do that through education. You do that through television programming in the arts. We are trying, and we have a partnership with the Getty Trust to produce a series on the arts for young people, similar to"3-2-1 Contact," in which the National Science Foundation invested $17 million of the taxpayers' money. We need to do more in that area, because the fact of the matter, Senator Domenici, is that the arts outside of the popular culture are essentially the province today of the better educated, the people who have gone on to college. They are not a part of the lives of the average American. And that is a very sad thing.

If the only artistic experience, generally speaking, is the popular culture, as good as that popular culture in some aspects is, it is a very narrow slice of culture, and it does not include, generally speaking—there are exceptions to everything, but generally speaking, it does not include the cultural heritage out of which the American identity comes, and it does not include that variety of extraordinary creativity that is going on outside of the Nielsen ratings on television and the like.

Now to have a sense of that variety, you have to feel comfortable with it. To be comfortable with it, you have to have a sense of the vocabularies of it. No English teacher would dream of instructing a kid to read Dickens—and in many high schools in our country they can't teach Dickens anymore, because the kids don't have the vocabulary to read Dickens—but nobody would suggest reading Dickens without some sense of the 19th century English vocabulary.

Similarly, you cannot listen to Beethoven's fifth, nor can you really listen to—from New Mexico, "con junto" music, if you come from the Anglo population, without some sense of how those things are put together. Otherwise, it comes as an alien form.

My hope is that—through arts education, through touring, through reaching rural communities, through adult education—we are encouraging arts institutions to do that. I don't want to just leave it to the kids—that gradually the Endowment and the Department of Education and others, not just us, can gradually help build up—what I call cultural literacy.

If I could—I'm sorry, one more sentence. I have to say you are right that I don't know how you get from here to here, if I could return to the chairman's and Senator McClure's earlier point I am less concerned—in fact, it might even be inappropriate for the Federal Government—to design the mouse trap, to put it into effect. I don't think we should do that in education.

What I am concerned about is changing the nature of the dialog in school boards, so that they will start talking about what the outcomes should be. What do we want our kids to come out of all of this with? I ask this question all across the country when I do my speeches, and the answer is, over and over again, from just citizens who are on school boards and teachers, we want all of our kids to have an appreciation of that variety of culture that exists outside of the popular culture. They don't say all of that, but this is the essence of it. And then I ask them the question. Do your arts resources, does your arts education that you have in the schools get you from here to there? And there is usually a shuffling of the feet, and eventually the answer is no. And I say, well, why is that? You've got as many art and music teachers in the schools. You're spending 15 percent of the school day—that's money, that's your money. You say this is what you want, and you say you are not getting there, and you are spending all this money. Why don't we get together and see if we can change the thing? That is what I am interested in. [Laughter.]

Senator DOMENICI. Thank you very much.

Chairman BYRD. Senator Cochran.

COMMENTS FROM SENATOR COCHRAN

Senator COCHRAN. Mr. Chairman, thank you very much for your recognition.

Let me congratulate Frank Hodsoll for the strong leadership and support he has attracted to the arts from all around the country. State and local governments, art agencies, and the private sector have all increased their support and financial commitment to the arts in our country during the time he has served as director or Chairman of the National Endowment for the Arts, and so I think he deserves the commendation of all of us who are interested in the arts. I just note that in his statement—I am sure other Senators saw this—private sector giving to cultural activities has increased dramatically over the last several years. It was $6.4 billion in 1987, double what it was in 1980. I think that is strong evidence of the effective leadership that we have seen from him in this area of encouraging support for the arts.

As far as assistance to local arts agencies and States are concerned, I might point out that matching grants and challenge grants have been very productive and helpful in our State of Mississippi to local arts agencies and performing companies such as the Mississippi Opera.

I also would like to mention that the International Ballet Competition which is hosted in Jackson, MS, every second or third year on a rotating basis around the world, is an important potential grantee of assistance from the National Endowment for the Arts. It is the legally sanctioned host city in our country for the International Ballet Competition, and it has been a tremendous success. It has enjoyed a nationwide or worldwide audience, for that matter, and it really has been an important contribution to the life of not only the city of Jackson and our State of Mississippi but to our country, the way it has been handled.

If an application for financial assistance is received from the city of Jackson, I hope it can be carefully considered in the next round of competition, whenever that may occur. I am not sure whether it is next year or the year after that we are due to host it again. But I wanted to put in a plug for that activity and urge the Endowment, if it is under your chairmanship or, if not, if there are other here who can help remember this. That is a very important activity for a matching grant or a challenge grant.

Mr. HODSOLL. Yes, sir; thank you. We will keep an eye on it.

Senator COCHRAN. Thank you very much.

Chairman BYRD. Thank you, Senator Cochran. Senator Stevens.

ENDOWMENT FUNDING TRENDS

Senator STEVENS. Mr. Hodsoll, how much has Federal support for your area increased in your 7 years?

Mr. HODSOLL. Only very slightly, at less than the rate of inflation, and so, in real terms, it's been a decline, but essentially, our budget is flat. In the last year of the Carter administration the budget of the Endowment was $159 million, approximately; today it is $169 million, and of course, we are requesting $170 million for fiscal 1990.

Senator STEVENS. Has the match of the matching grants been changed?

Mr. HODSOLL. The matching requirements have not been changed, and basically, the Endowment, I think, does a splendid job, that is, the Endowment's grants do a splendid job of catalyzing additional private support for the arts, and State level support. If I may note, Senator Stevens, the States, in the aggregate, while our budget has remained more or less flat, have increased substantially, and these are taxpayers' dollars too, from about $100 million when I first came on board to now $269 million. So you've seen an enormous increase in public funds there. With regard to local government, that is a place, in terms of government funds, as well as private funds, where there is enormous potential. That is why we have established relationships with the U.S. Conference of Mayors, and I have been out talking with mayors all over the country over the last few years. But at the local level, while the statistics are a little spotty, from the 50 largest cities, we have seen an enormous increase there as well.

So in terms of general support for the arts, the last 7 years have been very good, but I would like to note in relation to Senator Cochran's very kind comments, that the reason why the private support and to some extent the State support is good—there are exceptions to everything—is that economy has been good, and there's been low inflation. We can track the statistics of philanthropy from the post-World War II period to today, and we can see—it is not absolute, and there are exceptions—progress that more or less tracks the economy. We've had a good economy, and I am grateful for that.

MATCHING GRANTS

Senator **Stevens**. Well, I remember our late and good friend, Senator Alan Bible, when he chaired this subcommittee, and I spent many hours with him. He had the idea that there ought to be more done by the Federal Government to try to stimulate the whole idea of the matching grants on the State and local level.

Has that been done?

Ms. **Hirsch**. Mr. Chairman, I would suggest to a very large degree that has occurred across the country. It directly relates—I would refer back to an earlier question of yours, Mr. Chairman, about how the rurals get reached or how the rest of America has an opportunity as citizens to participate in the arts, our partners—our public partners, the 50 States and 6 special jurisdictions and local arts agencies, in fact, have a heartbeat of what is going on in communities in their States. They entertain the annual planning process which includes bringing in their constituents, going around their States and listening, in fact, to the kinds of issues that are of urgency to their citizens and thereby respond in like way to it. We know, for example, at the State level, about 7½ times the numbers of organizations are reached directly by State arts agencies as we do at the Arts Endowment.

So the redoubling effect is very much stronger out there in States and in local communities.

RECOGNITION OF STATE AND LOCAL SUPPORT FOR THE ARTS

Senator **Stevens**. Has there been sufficient concern given for recognition of those people by the Federal Government, so that we can encourage and really reward the kind of activity that takes place at the State and local level? I have seen grants that come to my State, and I am pleased to see that come, and I wonder sometimes if we do enough with the Federal moneys to really encourage that expansion of effort at the State and local level, because in the final analysis, that is where the bulk of the support is going to come from.

Mr. **Hodsoll**. It sure is.

Senator **Stevens**. The matching moneys are right there in the localities. They ought to be matching their own local efforts first, and then they ought to match the State efforts next and match ours last. Sometimes I think the prestige of the Federal program is such that the money tends to flow to Washington first, and I wonder about that. I was just sitting here thinking. I do think when I do my mail, but I was thinking about this concept of how we might find a way to encourage more of that matching. You do get your money first, you know. Get your money first and then the State gets theirs, and then the local people get theirs last.

Mr. **Hodsoll**. Well, it may interest you Senator Stevens, to know that we had a study that was done by the National Assembly of State Arts Agencies in terms of who we all fund from the public sector, and the interesting thing is—again, I have to do it this way. I can provide for the record the exact figures—that we at the National Endowment fund that many institutions and artists, but it goes out to about there in terms of whom the States fund. So they fund a much broader array of artists and arts institutions than we fund. There is a statistical anomaly in that there are a few that we fund that they don't fund, but that is a very rare occasion.

Senator **Stevens**. Then you ought to go on further. The bulk of them have got to be funded at a community level.

Mr. **Hodsoll**. I don't have statistics, but I am sure that is the case, exactly, Senator Stevens.

But to get back to your point of recognition, as you know, President Reagan proposed and the Congress approved a National Medal of Arts similar to the Governors' Awards that take place at the State level, and the interesting thing about that award which has been under way now for 4 years, and I hope the Bush administration will continue it, is that we recognize not just artists, we also recognize patrons, including small patrons as well as big patrons. I think that is an important program. That is something the Kennedy honors doesn't do.

I think, however, to come back to your point, because I don't want to rest on any laurels here, I think we need to do more to recognize extraordinary efforts at the community and State level, and I would welcome the chance, and I think the Endowment ought to explore how we could do that.

RECOGNITION OF SMALL DONORS TO THE ARTS

Senator **Stevens**. I was just thinking, I had this small businessman of the year in Alaska in town last week. He is a very distinguished gentleman. There ought to be some way to recognize the small donor. I am not talking about the local fat cat that is going to contribute not only to the State and local and you too, but I am talking about the small donor. In the final analysis, if art is going to expand and art appreciation is going to expand and the whole concept is going to expand, it's got to be the small donor, because it is just like in anything else, it is the small donors that provide the bulk of the support in the long run on a sustaining basis.

I don't see anything yet in this program of ours where we stimulate that small donor and recognize the small donor, in terms of what they are doing for your program in the long run. I would urge you to think about that and come back to us and see if we can help you in some way.

Mr. **Hodsoll**. Sure will.

Senator STEVENS. But there ought to be a better recognition of the small donors. There's a lot of recognition of big donors, and I think that is endless, as a matter of fact. I do think there ought to be some greater recognition of those people who really support the arts in the long run, and that is the individual giver.

Thank you, Mr. Chairman.

Chairman BYRD. Thank you. Mr. Hodsoll, the Republicans on this subcommittee really do not outnumber the Democrats 4 to 1. [Laughter.]

Senator STEVENS. We're fully aware we don't, Mr. Chairman. [Laughter.]

OUTREACH IN FOLK ARTS PROGRAMMING

Chairman BYRD. The folk arts program encourages those art forms that have been passed on from generation to generation within ethnic, religious or familial groups, that have been informally learned, and that carry within them a sense of community aesthetic. This program has been held at a fairly stable level in recent years while other programs have received increased funding. In addition, folk arts is an area where the raising of outside funds is often difficult.

What types of outreach programs is the Endowment undertaking to improve the visibility and accessibility of this program?

Mr. HODSOLL. Thank you, Mr. Chairman. Basically, the first thing that we started some years ago, almost my second year in office, was the Heritage Awards Program, which our extraordinary director of the Folks Art program invented, Bess Hawes. I want to tip my hat to her. Basically, what that program does is select from the communities a wide variety of the most distinguished folk artists in the country. We bring them here, we give them an award. This Congress has been enormously supportive of this, and because we give the awards first in the Congress, it's been both on the Senate and on the House sides, and many of the members here at this table, committee members, have been present at those presentations. And then we have a concert, now at Lisner Auditorium, of the folk artists themselves. We get good publicity and media attention, although I would like to get more for that. So that is one way of showcasing these folk arts.

Second, we now have made a great effort to get the State arts agencies to take the folk arts more seriously. And by that, we have basically funded the State arts agencies to upgrade their folk arts programs and also provide for apprenticeships at the State level. It was very difficult for us to pick where the apprenticeships should be given at the Federal level, and so we have done that for the future. And that is why of all of the programs, and I recognize that this is a drop in the bucket, the Folk Arts Program is the only discipline program in our fiscal 1990 budget submission for which we request an increase from $3 million to $3,100,000.

What we would like to do in the future in the folk arts is to explore and to find better ways for the folk artists of our country to be able to display their work, to sell their work, to perform their work outside of their community, so that it will become better known, but we must do this, Mr. Chairman, in a way that doesn't put them on a treadmill, so that they can't continue to be community artists, because otherwise it will become a sort of souvenir kind of thing. So Bess and all of us at the Endowment are working on a variety of projects that we hope will do that.

FOLK ARTS FUNDING ALLOCATIONS

Chairman BYRD. How much money is being spent on these types of activities in fiscal year 1989 and how much for fiscal year 1990?

Mr. HODSOLL. $3 million in fiscal year 1989; $3,100,000 is proposed for fiscal year 1990.

STAFF TRAVEL FUNDS

Chairman BYRD. Are the program officials able to travel sufficiently to meet the needs in rural areas and in distant areas?

Mr. HODSOLL. Well, I think it is fair to say that our travel budget, which is always an item that requires a lot of justification—you know, we need every penny that we are requesting for that because it costs more to get to rural areas than to the more urban areas which are on the trunk routes.

Senator MCCLURE. That's deregulation.

Mr. HODSOLL. Whatever it is, it ends up with this effect, Senator McClure. We need our travel money for these purposes, and I hope that the committee will look favorably on our request for that.

GROWTH IN THE FOLK ARTS FIELD

Chairman BYRD. The Endowment budget indicates that the field of folk arts is entering a period of unprecedented activity and development. How is this being measured and what can be done to maximize exposure for the folk arts disciplines?

Mr. HODSOLL. Well, we are measuring it, basically—I can provide some statistics for the record that involve our application and grant process. In the area of the folk arts, the only statistics by which you can measure these things are in our program. There aren't service organizations out there that collect statistics, and so on. But we can provide those statistics to give you a sense of the different communities and the ethnicity of the communities, the different art forms, et cetera.

We are seeing increases in some and decreases in others. But coming back to showcasing these art, perhaps just one sentence of history. When the program began, the effort on the Federal level was to support what Bess Hawes calls in reach. And by that, it meant developing community support within the community for those art forms to become more a part of the contemporary community as well as, if you will, of the historic community.

Today, we feel we have done a lot of that, and things are getting healthier out there, but now what we need to do is to showcase these folk arts out beyond that. We have a number of ways of doing it from the documentation to doing films. We have tried to get a program on public television on the folk arts, which reaches out to other people but that hasn't succeeded yet, I have to confess. But we have been talking and we have money set aside for it. And we will be supporting craft festivals in different parts of the country, which then allows the crafts of the folk artisans to get out. All of these things. It is no one special tactic, Mr. Chairman. It is a variety of things in different places.

PRIVATE SECTOR FUNDS GENERATED THROUGH NEA MATCHING REQUIREMENTS

Chairman BYRD. There have been questions and there have been responses and discussion in connection with Federal/private cooperation. Could you provide the subcommittee with a breakdown of the private funds made available to the different program categories as the result of matching requirements?

Mr. HODSOLL. I will have to provide that for the record. It essentially tracks our grants, but we can do that for you, sir.

Chairman BYRD. Very well.

[The information follows:]

The Arts Endowment's enabling legislation mandates that all its Grants, except those to individual artists, be matched by the recipient on a least a one-to-one basis. Depending on their nature and design, some Endowment programs have higher matching requirements (e.g., Local Programs, Challenge, Advancement) or require that matches be made in new or increased contributions (e.g., the Expansion Arts Program's Community Foundation Initiative, Local Programs, Advancement, Challenge, the Museum Purchase Plan). Also, Treasury Fund Grants (which go to museums, public television stations, orchestras, presenting organizations, et cetera) generally require a three-to-one match. Overall, the Endowment estimates that every Federal dollar it invests in its grantees is matched by at least three to four additional dollars.

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. I will submit questions for the record.

Does anyone else have further questions?

[No response.]

Thank you for your testimony and thank your associates for their testimony, and other Senators may wish to submit additional questions for the record as well. We will appreciate your prompt response. Thank you very much.

Mr. HODSOLL. Thank you, Mr. Chairman.

[The following questions were not asked at the hearing, but were submitted to the Endowment for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Question. The fiscal year 1990 budget proposal includes a request of $1.4 million for the Arts in Schools Basic Education Grants. These grants are intended to promote arts as a basic element of education. The budget proposes to fund 28 planning grants and 8 implementation grants in fiscal year 1990.

Is the Endowment undertaking efforts to see that all States are aware of this program?

Answer. Since the Arts in Schools Basic Education Grants (AISBEG) category was established in fiscal year 1987, all states have been informed of the program through the following efforts:

(1) Each year AISBEG Guidelines are sent to all state arts agency (SAA) personnel, including executive directors and arts education coordinators;

(2) With assistance from the Endowment, the State Arts Education coordinators attend the National Assembly of State Arts Agencies annual conference. During this conference, workshops and sessions are scheduled to discuss the AISBEG program;

(3) The Endowment's AIE staff regularly communicates through memoranda to all state arts agencies. Memoranda typically include information such as information

on program applications and descriptive summaries of grant projects, as well as other programmatic information. In addition, AIE Program staff regularly communicate on an individual basis with SAA personnel.

(4) The Endowment's Public Affairs office routinely distributes press releases containing information about the AISBEG Program and listings of all grantees.

Question. Have any problems been encountered in the sufficiency of applications?

Answer. Applications to the AISBEG Program have been plentiful. Since 1987, nearly 50 percent of the states have received planning grants. By the end of 1989, the Endowment plans to have provided implementation grants to over 40 percent of the states.

Question. Which of these approaches is more likely to reach a broader student population?

Answer. Both approaches are important to achieve the goal of AISBEG—to encourage plans and projects that promote the arts in schools as a basic component of the curriculum, K-12—which in turn makes the arts available to the broadest student population. Planning grants offer SAA's the opportunity to receive up to $20,000 per year to assist them in planning strategies to make the arts a basic part of the curriculum, K-12. Implementation grants enable states to receive up to $50,000 for each of three years, to implement such plans. States do not need to have received planning grants to qualify for implementation grants. States may also receive more than one planning grant if, their planning processes require a longer planning period.

The Community Foundation Initiative assists minority and rural organizations in accessing private funding sources. As you know, private funding is an important supplement to Federal funds.

Question. What are your plans for this initiative in fiscal year 1990?

Answer. In June 1989, the Expansion Arts Panel will review six applications for the fiscal year 1990 Community Foundation Initiative (CFI) grants. The Endowment anticipates awarding two new grants and continuing support to 17 grantees who are in their 2nd, 3rd, or 4th year of this funding program. Also, the Committee may be interested to know that the Endowment plans to invite past and present CFI participants for a conference in June 1989. The purpose of the conference is to enable the leaders of the participating foundations to share common problems and solutions, and enable the Expansion Arts Program staff to collect data which will enable them to assess the effectiveness of the program.

Question. How many applications were received in fiscal year 1989? Funded?

Answer. In fiscal year 1989, three Community Foundations applied and all were funded.

Another special project within Expansion Arts is the Rural Initiative.

Question. What types of programs are being funded with these grants?

Answer. The Rural Arts Initiative was developed to support rural arts organizations that have shown the potential to develop artistically and administratively.

Under the Initiative, grants of up to $40,000 per year, for not more than three years, will be available on a competitive basis to state arts agencies (SAA's) for regranting to a limited number of rural arts organizations within their states. These funds must be matched on a dollar for dollar basis by the SAA (prior to being granted).

Rural arts organizations participating in the Initiative may use the regrant funds for any purpose that improves their organizational stability and development. Such purposes may be administration, development, marketing, and/or enhancement of the artistic capability of the organization. The first grants under this Initiative will be made in fiscal year 1989.

Question. Will there be some form of follow-up with the recipients to gauge the impact of these awards on the organizations?

Answer. Under the Rural Arts Initiative, state arts agencies (SAA's) are required to submit annual progress reports detailing the effect of grant funds on recipient rural organizations. In addition, grantee SAA's must re-apply in each of the three years of the project. The application process will include an evaluation of the previous years' activities and a site evaluation, both of which will annually be reviewed by the panel.

Question. Are there supporting institutions for the folk arts comparable to those for other arts disciplines?

Answer. The development of folk arts support institutions comparable to those in other artistic fields has been difficult and slow. The institutional support that does exist in the folk arts field might be characterized in the following ways:

(1) There is a small number (fewer than ten) of not-for-profit folk arts organizations whose primary purpose is the production of a range of folk arts events such as

festivals, concerts, tours, exhibits, and so forth. Typically, they are producing at capacity and cannot meet the demand for their programs. Limited remuneration for their efforts, however, prevents them from expanding and inhibits the creation of new organizations.

(2) Not-for-profit institutions, such as state and local arts councils, community-based cultural centers, and tribal councils undertake folk arts projects. Approximately 50 percent of all of the Endowment's Folk Arts Program grants go to cooperating organizations of this type.

(3) In terms of service organizations comparable to those representing other artistic disciplines, none exists in the folk arts. Folk arts producing organizations, however, occasionally take on tasks that primarily serve the field rather than further their own programmatic goals. Two examples of such groups are the National Council for the Traditional Arts in Washington, DC and the Ethnic Folk Arts Center in New York City.

(4) An important support network for the folk arts has emerged over the past ten years as many state agencies, for the most part state arts councils, have added folk arts specialists to their staffs, usually with Endowment's assistance. Folk arts specialists provide technical assistance and can be an important resource as they can increase contact between folk artists and their communities. Today, 48 of the 56 states and special jurisdictions have state folk arts coordinator positions.

One challenge to the folk arts is to provide exposure for their art to a larger audience through broader public performance, display, and marketing.

Question. What activities does NEA have underway in this area to support this objective?

Answer. The Program's main grant category, "Folk Arts Organizations," provides support for these types of activities. In fiscal year 1988, for example, 21 percent of the Program's total budget ($3,129,000) went toward festivals and concerts, 7 percent for exhibits, 7 perecent for tours, 6 percent for workshops and presentations in schools, and 8 percent for media projects such as radio and television programs that present the folk arts to a broader public. By their nature, many of these projects provide opportunities to enhance marketing possibilities for folk crafts. Occasionally, the Program supports special conferences to assist folk artists in solving their mutual problems, such as obtaining raw materials, receiving adequate remuneration for their labor, and reaching larger markets.

The annual National Heritage Fellowships provide national recognition to our country's exemplary master folk artists and artisans each year. Though the total dollars expended for these fellowships is only about 2 percent of the total Folk Arts Program budget, the artists and their art forms receive national attention as a result of a special concert and awards ceremony held in Washington, DC, which receives extensive press coverage.

Question. How can they be expanded?

Answer. The Endowment continues to work in several areas to develop increased support for the folk arts. As a result of the Endowment's efforts toward developing a network of state folk arts coordinators, state support for the folk arts has reached $4 million in recent years. Also, there is a burgeoning interest on the part of professional presenters in having folk artists included in their seasons' offerings, thus providing new avenues for folk arts touring. Another example of this type of effort is an Endowment grant to the New England Foundation for the Arts to hire a folk arts specialist to develop a regional folk arts touring program.

There is growing interest in the folk arts to develop programmatic spin-offs of the National Heritage Fellows. In 1988, for example, the Museum of International Folk Arts in Santa Fe, New Mexico, assisted by a grant from the Folk Arts Program, mounted an exhibit of the works honoring the crafts people who had received Heritage Fellowships. The exhibit will tour to a number of sites around the country. We will continue these types of efforts to develop a broader network of support for folk arts presentations. Though we have seen some improvement, it is clear that because the difficulties in developing folk arts institutions, the Endowment will continue to play a primary leadership role in this area for the foreseeable future.

INTER-ARTS

Question. The Inter-Arts program encourages the creation and presentation of arts of a diverse nature, including new art forms and innovative projects. The budget (p. 40) projects a substantial increase from fiscal year 1988 to fiscal year 1989 in the number of applications for new art forms projects. This growth is projected to carry into fiscal year 1990. Yet, the budget for new arts forms has decreased nearly 30 percent between fiscal year 1988 and fiscal year 1990.

On what basis is the Endowment proposing less funding for a subcategory in which the Endowment is also projecting a growth in applications?

Answer. Fiscal year 1989 is a transition year for Artists' Projects: New Forms, formerly known as Interdisciplinary Arts Projects.

The fiscal year 1988 budget figure for the Artists' Projects: New Forms category ($1,178,000) included $405,000 for what was in fiscal year 1988 referred to as the "Touring and Commissioning Initiative"; $773,000 was awarded in fiscal year 1988 for grants and for the sub-category "Initiative for Interdisciplinary Artists."

Beginning with fiscal year 1989, the Touring and Commissioning Initiative, renamed "Partnerships in Commissioning and Touring," has been more appropriately lodged within the Presenting Organizations category. It should be noted that the overall Artists' Projects category shows a reduction of only $178,000 from fiscal year 1988 to fiscal year 1989. The net result is an increase of more than $200,000 for projects in the category in fiscal year 1989 (a total of $1,000,000, up from the $773,000 noted above).

Although the Endowment has yet to receive all of the fiscal year 1989 applications, we expect a significant increase in the number of applications. The increased application load is principally attributed to the opening of the category to include single-discipline as well as interdisciplinary projects. After this transition year, we will have better information to judge the categories potential application level and may in the future revise our funding allocations.

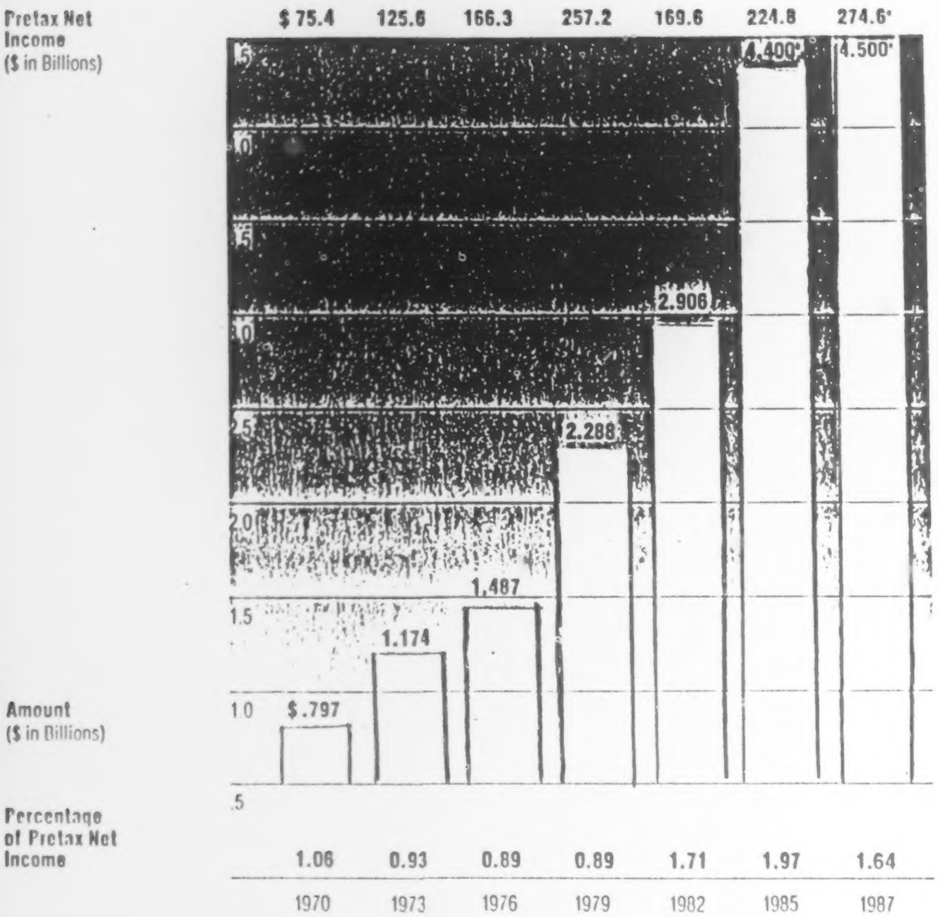
FEDERAL/PRIVATE COOPERATION

Question. One important aspect of both the arts and humanities endowments is the close relationship between Federal funds provided by the Endowments and the private contributions that are generated in return, often through a matching grant program. Your budget justification (p. 4) highlights a favorable trend, in that private contributions increased 10 percent from 1986 to 1987, to a level of $6.4 billion. Yet a puzzling corollary to this is that the corporate share of those private contributions remained essentially level at $4.5 billion.

Is this corporate giving a level that has remained steady over several years?

Answer. The figure of $4.5 billion referred to in our budget justification estimates the level of total corporate giving in 1987. Unfortunately, we do not have data breaking down the 1987 figure for cultural contributions ($6.4 billion) by type of donor, so we cannot say with any degree of certainty just how much corporations (or foundations, or individuals) contributed to the arts and humanities in 1987. However, in response to your question, attached is a chart from GIVING USA (AAFRC), showing the trend of total corporate giving in 1970-1987.

CORPORATE GIVING



Contributions[1]	Amount (Billions)	Pretax Net Income (Billions)	Percentage of Pretax Net Income
1970	$ .797	$ 75.4	1.06
1971	.865	86.6	1.00
1972	1.009	100.6	1.00
1973	1.174	125.6	0.93
1974	1.200	136.7	0.88
1975	1.202	132.1	0.91
1976	1.487	166.3	0.89
1977	1.791	200.4	0.89
1978	2.084	233.5	0.89
1979	$2.288	$257.2	0.89
1980	2.359	237.1	0.99
1981	2.514	226.5	1.11
1982	2.906	169.6	1.71
1983	3.627	207.6	1.75
1984	4.057	240.0	1.69
1985	4.400	224.8	1.97
1986	4.500	231.9	1.91
1987	4.500	274.6ᴾ	1.64

[1] IRS data through 1984. IRS figures reflect donations by corporations to nonprofits and to corporate foundations. They do not reflect giving by the foundations themselves, although all funds received by the latter are eventually distributed.

Sources: Internal Revenue Service, Department of Commerce, The Conference Board, Council for Aid to Education.

Source: Giving USA
Annual Report on Philanthropy for the Year 1987
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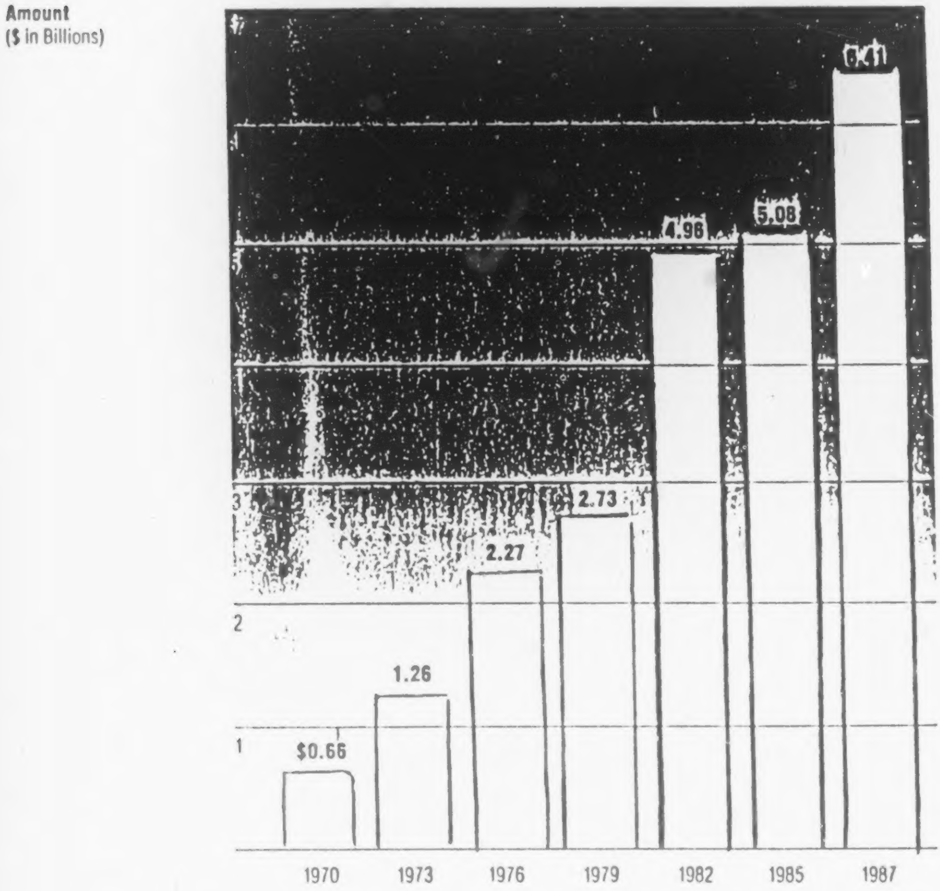
Question. What do you foresee as the long-range implications to the Endowment's programs from these patterns of private giving?

Answer. It is difficult to predict future giving trends on the basis of past giving trends as unforeseen factors can, and probably will, influence future giving patterns to one degree or another (e.g., overall economic vitality, tax rates, stock market performance, international developments, etc.). However, what can be said is that continued economic growth—with low inflation and low interest rates is essential to the health of the arts. If individual giving continues to increase, and corporate and foundation giving maintains at least current levels all these being vitally affected by economic growth (especially in terms of rising personal income)--then funding for the arts should remain solidly based.

Question. What has been the trend since 1980?

Answer. See the attached AAFRC charts regarding private giving since 1970.

PRIVATE GIVING TO ARTS, CULTURE AND HUMANITIES



	Amount (Billions)		Amount (Billions)
1970	$0.66	**1979**	$2.73
1971	1.01	**1980**	3.15
1972	1.10	**1981**	3.66
1973	1.26	**1982**	4.96
1974	1.20	**1983**	3.95
1975	1.56	**1984**	4.50
1976	2.27	**1985**	5.08
1977	2.32	**1986**	5.83
1978	2.40	**1987**	6.41

Source: GIVING USA
Annual Report on Philanthropy for the Year 1987
Page 114

Question. Are any NEA programs more affected by the shift in giving patterns than others?

Answer. Organizations in several fields served by the Endowment—such as Expansion Arts, Folk Arts, Literature and Visual Arts—generally find it more difficult to raise significant sums from the private sector than is the case in the more established arts fields; the same thing may be said with respect to smaller and less well known organizations in virtually all fields served by the Endowment. All fields have benefited from the steadily rising levels of private sector cultural support since the early 1980's. Individual artists, unfortunately, seldom receive appreciable private sector support, even in times of general prosperity; this is an area Endowment policy continually seeks to address through its categories which support individual artists.

STAFFING

Question. The supplementary budget information provided by NEA to the subcommittee indicates that staffing in your public affairs office is projected to increase approximately 74 percent (from 5 Full Time Equivalents to 9 Full Time Equivalents) from fiscal year 1988 to fiscal year 1989 and fiscal year 1990. Meanwhile, total staffing in the agency is projected to increase only about 2 percent (from 257 FTEs to 262 FTEs).

What accounts for such a drastic disparity?

Answer. The change in the FTE level for the Office of public Affairs does not represent an increase in staffing, but rather results from the transfer of the Arts Endowment's Public Information Office (switchboard, mailing of grant guidelines, general information support to the public) from the Endowment's Administrative Services Division to the Office of Public Affairs. There were three full-time equivalent staff years devoted to this function in the Administrative Services Division, and this transfer, through reorganization of the Endowment's Public Information and Public Affairs function, was undertaken to strengthen the communications activities of the Public Information Office and also to take advantage of the existing professional staff in the Public Affairs Office to assist with case work.

Question. Funding for the Public Affairs office has also increased. However, the personnel funds are proposed to increase only by 5 percent. To what do you attribute this difference?

Answer. In reviewing the supplementary budget chart we note that the costs provided for the Office of Public Affairs are in error. The Personnel Compensation figure for this office should read: fiscal year 1988 $221; fiscal year 1989 $331; and fiscal year 1990 315. Total expenses for Public Affairs should read: fiscal year 1988 $270; fiscal year 1989 392 and fiscal year 1990 $409. These estimates reflect some reductions from last year's estimates and are consistent with the realignment of personnel as discussed above which was inadvertently omitted from our computations.

Question. Are there activities being undertaken by the public affairs office which have not been conducted previously? If so, what are they and why are they so important?

Answer. The function of the Public Affairs Office with the incorporation of the Public Information function from the Administrative Services Division have remained relatively constant over the Arts Endowment's recent history. However, a number of activities have increased dramatically during the past two fiscal years. For example, the Endowment's Public Affairs Office has been called on to heavily support the Endowment's initiative in Arts Education subsequent to the release of the report, Toward Civilization. The Public Affairs Office has undertaken massive media campaigns and other activities throughout the country to help deliver the message concerning the need for local emphasis on arts education and for the development of curriculum for arts education. Other activities have included support work for the National Medal of Arts presentations, the development of an internal agency newsletter to better inform the agency's employees of activities and important information for their use, and enhanced efforts to improve the quality of the Endowment's Annual Report to the Congress.

NEA REPORTS

Question. Recently, NEA has published two major reports, "The Arts in America" and "Toward Civilization: A Report on Arts Education".

What has been the impact of the preparation of these reports on the program functions of the Endowment?

Answer. Most of the preparation of "The Arts in America" and related data collection and analysis were handled by staff of the Endowment's Office of Policy, Planning and Research (OPPR). The Programs did the initial research and drafting of text and in some cases were also able to engage consultants to assist them in this process. Revision and editing of this material was often time-consuming, but for the most part, this work was carried out by staff of OPPR, who consulted with the Program staff as necessary during the development of the document.

With respect to "Toward Civilization," except for the Arts in Education Program (AIE) staff, the Program staff was only slightly involved in the preparation of the report. The initial research for the report was carried out by a contractor, and development of the text was done largely by a small group of senior management staff, with the assistance of the Research Division (a department within OPPR) and the staff of the AIE Program.

Question. Do these reports detract from the ability of the program representatives to be in contact with their fields of specialty, and thus be aware of excellence and innovation in the field?

Answer. We do not feel that Program participation in the development of these reports hampered their contact with or knowledge about crucial developments in their fields. To the contrary, the data-gathering and analysis that form the basis for these reports are intended to assist and inform our Programs, as well as others in the field concerned with the health of the arts and progress in the field of arts education.

MEDIA ARTS PROGRAM

Question. What is unique about the projects conducted by the American Film Institute?

Answer. The American Film Institute is the only organization dedicated to film and television which provides major links between the commercial and not-for-profit worlds. It has a graduate school which trains filmmakers for entry into the feature film world; It also conducts an outstanding video festival, which many feel is the best in the country; it conducts a Directing Workshop for Women, which trains women to become directors of feature films, and has a program which places students to apprentice with feature film directors. The Center for Film and Video Preservation at the Institute provides the only central data base in the country on film and video preservation; it compiles the National Moving Image Database (NAMID) and publishes decade-by-decade catalogs of all American feature films.

Question. Are there other entities capable of offering the same services and producing the same quality work?

Answer. Other film schools exist, but none is positioned quite so favorably to conduct a dialogue with the feature film industry. Through the Institute's trustees and to some extent its staff, the Institute has access to an extraordinary range of talents connected with the making of feature film—directors, screenwriters, actors, producers, camera, design and lighting experts, etc.

The Institute's video festival is unique, and no other festival can match it. The Directing Workshop for Women is a one-of-a-kind and is important because it attempts to provide women with the skills to enter film directing, a field heretofore not generally open to women.

The activities of the Center for Film and Jideo Preservation, which coordinates the activities of nonprofit archives and studios, are not replicated elsewhere. Its two major projects (the data base and catalog) are fully supported by the film archival and film preservation community nationwide.

Question. Why aren't those projects awarded competitively?

Answer. This is a difficult question to answer, because the explanation resides primarily in the initial policies of the Endowment as it was first formed in 1965. At that time, few other media organizations existed, and the Institute was founded to serve the nonprofit media community. In addition, in some instances the Institute is the only one carrying out certain activities. The Institute's annual application is closely reviewed by a panel to ensure that its programs are conducted appropriately.

PRESIDENT'S COMMITTEE ON THE ARTS AND HUMANITIES

Question. The Budget request (p. 134) includes $280,000 in fiscal year 1990 for the President's Committee on the Arts and Humanities. This panel is due to expire at the end of fiscal year 1989.

Why are funds requested for fiscal year 1990?

Answer. Funds are requested for the President's Committee on the Arts and the Humanities in the fiscal year 1990 budget, because it was the intention of the

Reagan Administration, which prepared the budget, to provide funding for the Committee in the event that the new Administration would like to continue the Committee in fiscal year 1990.

Question. Would it not be more appropriate for President Bush to make a determination as to the future and funding for this organization?

Answer. The White House is currently reviewing all boards and commissions that serve at the pleasure of the President. The continuation of the President's Committee on the Arts and the Humanities is pending completion of this review.

AWARD EVALUATION

Question. In general, does NEA conduct any post-award evaluations?

Answer. Yes.

Question. If so, what criteria are used and how does the evaluation information get used by the Endowment?

Answer. The Endowment has issued guidelines (based on statutory provisions and OMB regulations) for conducting post-award evaluations of Endowment grants. These guidelines require final descriptive reports on grant supported projects; financial status reports on the use of grant funds; and when appropriate copies of the grant product (e.g., museum exhibition catalogs).

Final reports enable the Endowment staff to determine that the grant terms, conditions and objectives were met and the grant funds were used in a manner consistent with the panel and National Council on the Arts recommended grant purposes. Final descriptive reports are reviewed by the Program through which the grant was awarded. Evaluations of financial status reports are conducted by specialists in the Endowment's Grants Administration Office.

In the event that grantees fail to submit final reports within the required 90-day time-frame, grantees may be barred from receiving any further grants until all post-award evaluation reports are received and accepted.

Material obtained through final reports is also used for other purposes. For example, in the Endowment's Design Arts Program, a not-for-profit design information exchange utilizes final reports to create a database which serves as a national reference for designers on the myriad of design subjects supported by the Program. Another example can be found in State Programs which uses the final report and post-award process, working closely with the National Assembly of State Arts Agencies, to develop reports on grants made to the States and the uses of those grants.

QUESTIONS SUBMITTED BY SENATOR JAMES A. MCCLURE

PRIVATE FUND-RAISING

Question. According to the American Association of Fund-Raising Counsel, the private sector has doubled their contributions to cultural activities from 1980 to 1987 to $6.4 billion. In addition, contributions increased 10 percent from 1986 to 1987.

Has most of the growth come from corporations or individuals?

Answer. Since total giving by individuals (82 percent of all giving) is significantly greater than corporate giving (4.8 percent), whatever the proportions might be in the arts, individual giving has accounted for the bulk of growth in private sector arts support.

From 1986 to 1987, private arts and humanities support increased by 10 percent, from $5.83 billion to $6.41 billion. Of this $58 million increase, the data that GIVING USA can analyze reinforce the basic conclusion that most of the increase in private arts giving is attributable to individuals; the data also show considerable variation between fields in rates of increased giving among private sector sources. For example, the rate of increased individual giving ranged from 4.5 percent in the theater field to 28 percent in the field of opera.

In terms of overall philanthropy, corporate giving did not increase between 1986 and 1987 ($4.5 billion both in 1986 and 1987). This marked the first time in almost 20 years that there was not an increase in corporate contributions. The rate of corporate giving began to slow in 1984 and reached a plateau in 1987. However, in some arts fields—such as theater and symphony orchestras—corporate giving achieved significant growth in 1987 (10.9 percent and 9 percent in those two fields, respectively). We do not know whether corporate giving in the arts as a whole has leveled off and it is too early to predict whether corporate philanthropy in general will remain level for the long term.

An analysis entitled Toward Civilization was completed in March of 1988 (pg. 5). It documented the gap between the stated commitment and resources allocated to arts education and the actual results in schools. In addition, it made a comprehensive set of recommendations for improvement of the situation.

Question. What role, if any, do you foresee the private sector taking in this effort?

Answer. The principal source of support for public education is state and local government. Nonetheless, the private sector can supplement these resources through providing better classroom materials and funding the educational programs of artists and arts organizations.

Question. What part of the curriculum would you propose to displace to accommodate the proposal to increase arts education to two years for high school and 15 percent for other grades?

Answer. Arts education already occupies 15 percent of the school day in elementary school and 17 percent of the school year in middle school and junior high. No increases are suggested here, only that the time allotted be used seriously. In high school, we're suggesting arts units be included; 29 states now have some form of arts high school graduation requirement.

"Further displacement" is only one strategy for improving curriculum content and we do not necessarily advocate that to accommodate increased arts education in the schools. There are other ways to improve curriculum content such as "realignment" (moving a course from one level to another which is more appropriate); "multidisciplinary" (where an existing arts course may be enhanced so that students learn content which is applied to more than one art form such as: understanding the principle of line in visual art, music, and dance); "integrated" (where an existing curriculum is fused into another so that content is learned in two or more disciplines such as understanding how literature [e.g., Uncle Tom's Cabin] reflected and affected the social and political climate when it was published.)

Our concern is not just for the quantity of arts education that is taught in our schools but for its quality. The improvement of curriculum requires greater clarity and focus in what is offered, not necessarily more time. The aforementioned approaches outlined above can be pursued by individual teachers or by teams of teachers.

In response to the proposals in Toward Civilization, you have requested an additional $1.0 million ($5.6 million in fiscal year 1989; $6.6 million in fiscal year 1990) for the Arts in Education Program (pg. 98)

Of this increase, $500,000 is requested for up to ten school districts across the country for grants to develop articulated K-12 arts education programs which can demonstrate how curricula can be sequentially planned and linked from grade level to grade level.

Question. How do you plan to provide for distribution of the grants between suburban, rural, and urban school districts?

Answer. Using the peer panel review process, criteria will be used related to geography and size and socioeconomic student make-up. To ensure comprehensive notification of districts of all sizes and locales of this grant opportunity, notification of the formal Requests for Proposals will be included in widely distributed announcements as "Grants Contracts Weekly" and Education Daily.

Question. By sequentially planning, do you mean we have all the right courses but in the wrong places?

Answer. By sequential planning we mean that learning occurs across two dimensions: one is horizontal in terms of the curriculum that is taught on a given grade level; the other is vertical in terms of what follows from one year to another. In many cases there are courses in the secondary schools and curricula in the elementary grades that are very good; however, in the vast majority of schools and districts these curricula and courses are not related in such a way as to build across the disciplines in a given year or upon each other from year to year. We hope to help schools plan a curriculum that is consecutive and also relates arts education to other subjects studied.

DESIGN ARTS

Question. Since fiscal year 1988, funding for Design Advancement has been reduced from $2,846,000 to a proposed level of $2,350,000 in fiscal year 1990 (pg. 23). This proposed decrease comes at a time when applications have remained fairly constant and you expect the number of awards to remain fairly constant.

Why is the Design Arts program becoming a lower priority?

Answer. The Design Arts Program has not become a lower priority nor has there been an overall decrease in funding to design arts. For the Design Arts Program, we have requested a decrease in funds allotted for grants with a concomitant increase in funds allotted for Design Initiatives. (Also see answer to question 15)

Question. Is there a reason you are proposing to decrease the size of the awards?

Answer. The Endowment is not proposing to decrease the size of the awards. The size of awards have been recommended by individual Design Arts panels in order to fund as many quality projects as possible. A review of grantee organizations has shown that Endowment support, generally helped organizations to raise significant private funds to undertake the Endowment funded projects.

DESIGN FELLOWSHIPS

Question. In fiscal year 1989, you initiated a new subcategory called USA Fellowships (pg. 22). These fellowships support independent study and travel within the United States for those with a compelling interest in more extensive firsthand knowledge of the American-built environment.

At last year's hearing you anticipated 75 applications and 5 awards.

What is the status of this program?

Answer. To date, the first of two rounds of applications for USA Fellowships has taken place. In September, 1988, we received 25 applications and awarded four fellowships. The next deadline for applications is March 10, 1989. We anticipate receiving at least 25 applications and anticipate awarding three fellowships.

Question. What is requested for the program in fiscal year 1990?

Answer. The fiscal year 1990 request for USA Fellowships is $100,000, a level equal to the fiscal year 1989 request.

DESIGN INITIATIVES

Question. You have requested an increase for the Design Initiative program from $1,100,000 in fiscal year 1989 to $1,370,000 in fiscal year 1990 (+25 percent). You estimate that the number of applications will increase from 24 to 25 and the number of awards will also increase from 11 to 12

Is there a particular reason for this increased emphasis?

Answer. The increased funding request for the Design Initiatives category was the result of the annual review of design priorities by the Design Arts Overview Panel, a group of outside design experts that meets once a year to review, discuss and analyze current Design Arts Program and field issues. An increased role by the Design Arts Program was recommended in design arts education, federal design quality, and industrial design as well as expansion of the Program's Mayors Institute on City Design.

ADVANCEMENT

Questions. The Advancement Program is designed to help small organizations of artistic quality gain a greater financial and administrative stability (pg. 112). The program is broken down into two phases:

First, is the Technical Assistance Phase which assists organizations to develop a comprehensive artistic and management plan. Second, is the Advancement Grant Phase which supports specific strategies developed during the first phase.

How many of the organizations about to complete the technical assistance phase expect to move into the advancement grant phase?

Answer. All organizations completing the technical assistance phase and producing an acceptable long-range plan are eligible to apply for a Phase II Grant. At present, we know of no organization currently participating in technical assistance which is not likely to continue on to Phase II. Advancement consultants are in regular contact with the participating groups; consequently, problems in completing the process are normally identified and rectified before they result in disqualification for funding. Grant amounts do vary and can range from $25,000 to $75,000 depending upon the merit of the application and the ability of the applicant to raise matching funds.

Question. If some aren't making the shift, is there a reason?

Answer. Typically, the only reason that an organization would not continue on to Phase II would be its decision to withdraw from the Program before successfully completing the technical assistance phase or a decision not to apply for a Phase II grant. Such instances are rare but can result from circumstances such as the unexpected departure of key personnel or an inability to absorb the workload of an Advancement grant in addition to normal operations. Screening conducted before the selection of participants is intended to identify organizations with the capacity and will to take full advantage of the technical assistance opportunity. Barring serious and unforeseen problems, there is an expectation that participants will complete both phases.

I note that the amount you have requested for the Technical Assistance Phase in fiscal year 1990 is the same amount requested in fiscal year 1989 ($1.3 million).

Question. Does the strong showing of organizations moving out of the Technical Assistance Phase increase or discourage the next group coming into the Technical Assistance Phase?

Answer. We believe that interest in the Advancement program is increased as each group successfully moves through the process. Applications increased by more than 50 percent in fiscal year 1989 from the previous application cycle and at least a portion of this increase is attributable to word-of-mouth communication amongst organizations about the Advancement experience. However, there are practical limits to the number of organizations which can be accepted into the program in any given year. Advancement seeks to engage the best available arts management consultants and case loads are limited to 4-5 client organizations per consultant. At present, we do not believe that the Program could be increased to more than 50 participants without a negative effect on the quality of service provided.

CHALLENGE

Question. The Challenge Program was established eleven years ago to strengthen the arts over the long term (pg. 116). It offers one-time grants for activities which look beyond an organization's current needs and programming. It complements the work of other Endowment programs and stimulates public and private investment in such long-term vision by requiring that each Federal dollar be matched three-to-one.

The Challenge I and Challenge II programs focused on augmenting the financial stability, enhancing the artistic quality, and broadening the funding base of some of the leading arts institutions.

The Endowment is now moving into Challenge III which is a program the Endowment hopes can address issues broader than those affecting a single institution.

Since fiscal year 1990 will be the first year the Endowment will be funding only one Challenge program, funding for fiscal year 1990 is proposed to decrease from $18.5 million to $15.5 million.

If you are phasing out one of the Challenge programs and reducing the funding accordingly, why do you anticipate the number of applications to increase from 168 to 205?

Answer. The estimate for fiscal year 1990 Challenge applications is based on several factors. First, the Challenge III guidelines allow broader eligibility than Challenge II, opening the program up to many types of not-for-profit organizations, educational institutions, and public agencies which are potentially competitive for support of arts projects. The lower minimum grant amount opens the Program to a tier of smaller-budget organizations, and the provision for consortium applications allows organizations to participate in more than a single application. Additionally, a number of major institutions which were concluding Challenge II grants in fiscal year 1989 are now eligible to apply to Challenge III. Finally, Challenge III guidelines have now been available for nearly two years, providing adequate lead time for the preparation of complex project plans. The availability of a list of projects actually supported in the initial funding round will help to clarify the new direction of the Challenge Program for many potential applicants. Distribution of a descriptive brochure and presentations at national and regional meetings have also helped to inform the Endowment's constituency about this opportunity.

It should be emphasized, however, that the figure of 205 applications is a projection based on limited experience with a new program. Since we anticipate 35-40 awards, the program will remain highly competitive whether or not this application level is realized. To date, the Program has received 191 letters of intent to apply for fiscal year 1990.

Question. On what type of broader issues do you anticipate Challenge III will focus?

Answer. Challenge III is designed to respond to field opportunities and issues as they arise. Whenever arts professionals gather in national or regional meetings, discussions inevitably turn to the kinds of action which are needed to encourage creative vitality, extend the arts to underserved areas, build informed and appreciative audiences, or build a diverse base of support for the arts. Frequently, such discussions are the seedbed for Challenge III project concepts. The Endowment's 1990-1994 Five-Year Planning Document specifically noted nearly thirty field priorities which were amenable to Challenge III support. Examples include:

Projects with the private sector to uncover and encourage new resources for individual artists;

Broad collaborations designed to bring artistic excellence to audiences currently lacking opportunities for access to a diversity of high-quality art (including, probably, special opportunities to enhance small town/rural arts programming);

Projects to assist dance companies to increase performance possibilities over the long term through summer homes, second homes, regional homes, special touring arrangements, etc;

Opportunities for consortia of literary presses to apply for assistance to acquire computer technology (word processing, computer typesetting and modem transmission of text) and develop cooperative direct mail systems to reach literary audiences; and,

A new initiative to encourage appropriate museums to develop, perhaps in a collaborative effort, major television programming in the visual arts.

Question. Challenge III is uniquely positioned to support special initiatives in these and many other areas as they develop. It is best viewed as a flexible pool of "venture capital" available for stimulating public-private partnerships to accomplish goals of long-term consequence to the arts.

Is the cost of the Challenge III program more than the Challenge II program and the Challenge I program?

Answer. The cost of administering the Challenge III program is roughly equivalent to that of previous Challenge rounds. Both are complex programs which require extensive application analysis, panel scrutiny, and post grant monitoring over a several year period. The average grant size in the first funding round of Challenge III ($360,000) is also within the range provided by past Challenge II rounds ($200,000-$600,000). In each case, total administrative cost depends upon the number and average size of grants supported in a given year. Because Challenge III is a new program, the Endowment has requested a reduced Challenge appropriation (actually a significant increase over the $9 million expended for Challenge III alone last year). After additional experience with the quantity and calibre of applications, consideration will be given to appropriate levels for the future.

Question. Since the Endowment spent $125 million on the Challenge II program, what are your total funding plans for the Challenge III program?

Answer. The Challenge I and Challenge II had a relatively fixed constituency of major institutions and a limited objective—to assist these institutions on a one-time basis with capital development for long-term stability. Challenge II allowed many institutions to return to the Endowment for additional support after successfully completing a Challenge I grant, 60.7 percent of Challenge II grantees were repeat awardees. By 1987, it became apparent to most of the Endowment's panels that the level of competition in Challenge II had dropped considerably. In Round 6, the Endowment had funded 16.4 percent of the applications submitted; by Round 10, this figure had climbed to 48.6 percent. In the 11th and final round, it was possible to fund all applications judged worthy of support by the discipline panels.

By contrast, Challenge III is an open-ended program designed to address important long-term issues in artistry, access, appreciation, and support systems as they arise. As such, it is limited only by the initiative of its constituency. Determination of the program's duration and size will be based on its effectiveness in bringing a variety of resources to bear on these issues and the success of the large-scale projects supported.

In fiscal year 1989, both the Challenge II and Challenge III programs are ongoing. Approximately $13 million of the $18.5 million appropriated for the Challenge program will be spent on Challenge II.

Question. Since this budget was put together sometime ago, do you really feel that everything you want to have accomplished in Challenge II will have been accomplished?

Answer. In the final round of Challenge II (Round II), a special effort was made to accommodate all remaining competitive applications. On February 16, 1989, the Endowment announced the award of 68 Challenge Grants totalling $19.165 million. The Endowment believes that the final round of Challenge II was adequate to serve all competitive applications.

PAY ABSORPTION

Question. In fiscal year 1989, the Endowment was forced to absorb $190,000 in additional pay costs and $80,000 in additional retirement costs.

Were these absorptions made through other savings or were specific programs adjusted?

Answer. The increased costs associated with the fiscal year 1989 pay raise and associated benefits were absorbed by making reductions in non-personnel object classes within the operating portion of the Administrative account. Program funds were not affected by this absorption. Reductions were made in Staff Travel, Equipment Rentals, Supplies and Materials, Equipment Purchases and Contractual Services. Savings were generated by a combination of deferring certain planned activities and curtailing others.

Question. If specific programs were adjusted, please provide an analysis of the impact for the record.

Answer. The cost absorption was made through reductions in non-personnel object classes within the Administrative Budget. These reductions did not affect any specific Program funds.

ADMINISTRATION

Question. For fiscal year 1990, you have requested an operating budget of $18.4 million, an increase of $950,000 (+5.2 percent) over the fiscal year 1989 base level (pg. 123). Even with this increase, the Endowment is still absorbing some of the 4.1-percent pay costs increase.

Is that right?

Answer. The fiscal year 1990 Administrative Budget Request of $18.4 million includes funds to cover the full cost of the 4.1 percent pay raise. There is, however, an overall shortfall of approximately $75,000 in benefits in fiscal year 1990 which will have to be absorbed within the existing budget request. The major portion of this anticipated shortfall ($57,000) is for the increased cost of employee Health Insurance.

QUESTIONS SUBMITTED BY SENATOR DENNIS DECONCINI

Question. Chairman Hodsoll, in your testimony you state that private giving to cultural activities has increased dramatically in the past eight years.

To what do you attribute this increase in philanthropy for the arts?

Answer. This increase in philanthropy can primarily be attributed to the state of the economy. Over the last eight years, the country has undergone sustained economic recovery, which coupled with low inflation has provided a healthy environment for arts support.

Question. Comparatively speaking, has the role of the Federal Government in the funding of the arts kept pace with private giving?

Answer. Comparatively speaking Federal support for the arts has not kept pace with private support. However, over the past eight years, Federal support for the arts has increased by 6.1 percent, providing a modest but steady portion of total support for the arts.

Question. I see in the Endowment's fiscal year 1990 budget request that the program designed to enhance private giving, Challenge grants, is significantly cut.

Do you foresee an impact on private giving to the arts as a result of these cuts?

Answer. The reduction in Challenge Funds during fiscal year 1990 will not have a negative effect on the level of private giving to the arts.

Question. Why or why not?

Answer. Since the beginning of the Challenge Grant Program in 1978, the objectives of these grants have included "broadening the base of contributed support" and "increasing contribution levels" for each institution served. These effects do not end with the termination of the Federal Grant, but continue to benefit each organization in future years. During Challenge I and Challenge II, these awards helped to establish new levels of ongoing private giving to over 600 of the nation's most outstanding arts institutions.

The Challenge III Program involves new guidelines and a change in allowable uses of funds. In fiscal year 1990, the second round of this distinctly revised program, we are actually increasing the amount allocated to Challenge III, from $9 million to approximately $15 million. While the stimulus to increased private giving could be extended at higher levels, our fiscal year 1990 request for Challenge funds is the anticipated level which will be required to fund the most competitive applications during the second year of the transition from Challenge II to Challenge III. Future requests are likely to increase after assessment of this initial application round.

Question. For the past two fiscal years, the portion of the Endowment's budget that has grown at the greatest rate has been administration.

Could you please explain why there has been an increase in the funding of the Endowment's administrative programs at a rate that at least doubles the other programs?

Answer. It is difficult to make comparisons between the Endowment's Administrative and Program budgets. Although the Administrative budget is somewhat sensitive to Program funding levels (e.g., the cost for paying for panelists, guidelines printing, etc.) the Administrative budget unlike the Program budget is subject to increases from factors which are beyond the Endowment's control.

Despite several management improvements and cost saving measures, unfortunately the Endowment's Administrative budget has continued to grow while the Agency's total budget has remained relatively flat. The major factors causing the Administrative budget to increase over the past two years have been successive Federal employee pay raises totaling 6.1 percent of total salary costs; incremental costs associated with continued transition of our staffing complement into the new Federal Employee Retirement System (FERS); increases in space and equipment rental costs; and general inflation in the economy affecting the costs of goods and services. Because personnel compensation continues to account for a significant portion of the Endowment's Administration budget (approximately 67 percent in fiscal year 1990), any increase in salaries have a major impact on the Administrative budget level.

Question. Could you please provide the budget figures for the administrative portion of the Endowment's budget for the past eight years?

Answer. The following is a summary of the total Administrative funding from fiscal year 1980 through fiscal year 1988:

Fiscal year:	
1980	$12,210,000
1981	12,135,000
1982	11,326,000
1983	12,600,000
1984	13,223,000
1985 [1]	15,582,000
1986	14,822,508
1987	16,100,000
1988	17,140,000

[1] In fiscal year 1985, funding for Policy, Planning, and Research, the Regional Representatives program, and Intergovernmental Personnel Act positions were transferred to the Administrative budget from the Program account.

Question. I'm sure you know the part of the country that I represent, the southwest, has a rich cultural history. You indicate that progress is continuing on the national arts and literature research centers the Endowment co-funds with the Department of Education in Illinois and New York.

Has the Endowment given any consideration to expanding this program to locate centers in the western United States?

Answer. The creation of an Arts Education Research Center in the fiscal year of 1987 established funding for three years, or until fiscal year 1990, by both the National Endowment for the Arts and the Department of Education.

Solicitations were sought from throughout the country and a panel which reviewed the applications consisted of individuals from all areas of the country including the southwest.

At present both the Endowment and the Department of Education are discussing the potential for a new competition for an arts education center. Current funding provides for two divisions of the center: one at the University of Illinois at Urbana and the other at New York University in SEHNAP (School of Education, Health, Nursing, and Arts Professions). In addition, we would hope to continue to fund the Literature Center which presently is established at the State University of New York at Albany. In all cases, any new solicitation would encourage participation from all parts of the country including the southwest.

Question. Could you please explain the criteria you use when awarding the Chairman's Action Grants? What differentiates the recipients of these grants from those funded through the normal channels?

Answer. As stated in the Endowment's Grants Management Manual, the criteria for awarding Chairman's Action grants is as follows:

"Chairman's Action grants will generally be used in situations that include, but are not limited to, the following:

1. A response to an application for financial aid resulting from an emergency situation (e.g., the destruction of a facility by fire or flood) with an attendant need for immediate financial relief; or,

2. A response to some other type of situation of such unique merit and/or difficult time constraints as to warrant an immediate response by the Agency.

The Endowment makes Chairman's Action grants sparingly. In fiscal year 1988, Chairman's Action grants amounted to less than 1 percent of all awards made.

All recipients of Chairman's Action grants must meet general Endowment eligibility requirements. To the extent possible, Endowment panels review requests for Chairman' Action grants. Frequently, organizations receiving Chairman's Action grants have previously received Endowment grants through the regular award process.

Chairman' Action grants are differentiated from those grants which undergo our regular review process by the unique circumstances under which they are typically made. As the Federal Agency with principal responsibility for funding the arts, it is important that the Endowment have a method which provides flexibility in addressing unique and urgent situations as they arise.

Question. Could you please provide for the Committee a list of the participants in the Advancement Program?

Answer. The attached list presents, by artistic discipline, all organizations which have participated in the Advancement Program to date, including the 50 fiscal year 1989 participants which were recently approved by the National Council on the Arts.

Question. What criteria does the Endowment use in determining the suitability of a particular arts organization to participate in the Advancement Program?

Answer. Applications for participation in the Advancement Program are reviewed by peer panels on the basis of four criteria:

Artistic Excellence.—The artistic excellence of the activities and programs of the organization on a national or regional scale.

Impact.—Potential benefit to the organization from planning and technical assistance.

Capacity to Implement Change.—The current level of resources, and degree of commitment that can be directed toward organizational development.

Sustained performance.—The ability of the organization to sustain a high degree of artistic excellence and administrative stability in the midst of change.

Question. I am pleased to see the Endowment's Rural Arts Initiative. Many times the rural population in this country is overlooked when it comes to providing cultural resources. In your testimony, you indicate that the Expansion Arts Program has been increased in fiscal year 1990 to fund the Rural Arts Initiative. However the Endowment's budget justification indicates that the budget request is the same as last year's.

Could you please clarify this?

Answer. In my testimony, I indicated that an increased amount is proposed for our Rural Arts Initiative in fiscal year 1990. This increase will be offset by slightly reducing the amount budgeted for the Community Foundation Initiative in fiscal year 1990.

Program listing of advancement participant and grantee organizations—fiscal year 1980–89

Program/organization/city	*Fiscal year*
Arts in education:	
Selma Levine School of Music, Washington, DC	1989
Texarkana Regional Arts & Humanities Council, Texarkana, TX	1989
Dance:	
American Deaf Dance Company (Sharir Dance Company), Austin, TX	1988
Arts Resources in Collaboration (ARC Videodance) New York, NY	1988
Ballet Aspen, Inc., Aspen, CO	1988
Ballet Concierto de Puerto Rico, Santurce, PR	1988
City Celebration, Inc., San Francisco, CA	1988
Concert Dance Company of Boston, Watertown, MA	1988
Dan Wagoner Dance Foundation, New York, NY	1984
Dance Exchange, Washington, DC	1988
Dance Umbrella, Boston, Inc., Cambridge, MA	1988

Program listing of advancement participant and grantee organizations—fiscal year 1980–89—Continued

Program/organization/city	*Fiscal year*
Danspace (St. Mark's Church in the Bowery), New York, NY	1984
Dean Dance & Music Foundation, New York, NY	1988
Foundation for Dance Promotion, New York, NY	1984
HARRY's Foundation (Dance and other works by Senta Driver), New York, NY	1988
House Foundation for the Arts, New York, NY	1984
Jose Limon Dance Foundation, New York, NY	1988
Margaret Jenkins Dance Company, San Francisco, CA	1984
New Dance Ensemble, Minneapolis, MN	1988
New Performance Gallery, San Francisco, CA	1984
Performance Space 122, New York, NY	1988
Pick Up Company (David Gordon), New York, NY	1988
Oberlin Dance Collective, San Francisco, CA	1984
Pentacle/Danceworks, Inc., New York, NY	1984
Repertory Dance Theatre, Salt Lake City, UT	1988
Trisha Brown Dance Company, New York, NY	1984
Design Arts:	
East Tennessee Community Design Center, Inc. Knoxville, TN	1985
New York Landmarks Conservancy, New York, NY	1988
Expansion Arts	
Alternative Roots, Atlanta, GA	1989
Asian American Dance Theatre, New York, NY	1985
Association of Hispanic Arts, New York, NY	1989
Bilingual Foundation for the Arts, Los Angeles, CA	1985
Brandywine Workshop, Philadelphia, PA	1989
Capitol Ballet, Washington, DC	1980/Pilot
Center for Positive Thought, Buffalo, NY	1980/Pilot
Chicago Children's Choir, Chicago, IL	1985
Dashiki Project Theatre, New Orleans, LA	1980/Pilot
Dayton Contemporary Dance Company, Dayton, OH	1989
Dimensions Dance Theater, Inc., Oakland, CA	1989
DuSable Museum of African American History, Chicago, IL	1989
East West Players, Inc., Los Angeles, CA	1985
El Museo del Barrio, New York, NY	1980/Pilot
El Teatro Campesino, San Juan Bautista, CA	1980/Pilot
Elma Lewis School of Fine Arts, Dorchester, MA	1980/Pilot
Ethnic Folk Art Center (Balkan Arts) New York, NY	1980/Pilot
Frederick Douglass Creative Arts Center, New York, NY	1980/Pilot
The Group Theatre Company, Seattle, WA	1985
Institute of Alaska Native Arts, Fairbanks, AK	1989
Jamaica Arts Center, Jamaica, NY	1985
Jazzmobile, New York, NY	1980/Pilot
Jubilee Community Arts Center, Knoxville, TN	1985
La Pena Cultural Center, Berkeley, CA	1989
La Raza Graphics Center, Inc., San Francisco, CA	1989
Liga Estudaintes de Arte de San Juan, San Juan, PR	1989
Los Angeles Theatre Works (Artists in Prison) Los Angles, CA	1980/Pilot
Metropolitan School for the Arts, Syracuse, NY	1985
Mixed Blood Theatre Company, Minneapolis, MN	1985
National Center of Afro-American Artists (Museum Division, Boston, MA	1985
Negro Ensemble Company, New York, NY	1980/Pilot
Oakland Ensemble Theatre, Oakland, CA	1985
The Old Creamery Theatre Company, Garrison, IA	1985
Opera de Camara, Inc., San Juan, PR	1989
Pan Asian Repertory Theatre, New York, NY	1985
Philadelphia Dance Company (Philadanco), Philadelphia, PA	1980/Pilot
Repertorio Espanol, New York, NY	1980/Pilot
Richard Allen Center for Culture and Art New York, NY	1985
Road Company, Johnson City, TN	1980/Pilot
SEW Productions (Lorraine Hansberry Theatre) San Francisco, CA	1985
St. Louis Black Repertory Company, St. Louis, MO	1989

Program listing of advancement participant and grantee organizations—fiscal year 1980–89—Continued

Program/organization/city	*Fiscal year*
Studio Museum in Harlem, New York, NY	1980/Pilot
Taller Puertorrigueno, Philadelphia, PA	1989
Thalia Spanish Theatre, Inc., Sunnyside, NY	1989
Visual Communications, Los Angeles, CA	1989
Folk Arts:	
Blue Ridge Institute (Ferrum College) Ferrum, WV	1984
City Lore: New York Center for Urban Folk Culture, New York, NY	1988
National Council for the Traditional Arts, Washington, DC	1984
The Old Town School of Folk Music, Chicago, IL	1984
Inter-Arts:	
Anchorage Concert Association, Anchorage, AK	1985
The Artists Foundation, Inc., Boston, MA	1985
Catamount Film and Arts Company, St. Johnsbury, VT	1985
CenterArts (Humboldt State University) Arcata, CA	1985
Center for Arts Information, New York, NY	1985
Center for Occupational Hazards, New York, NY	1985
Contemporary Arts Center, New Orleans, LA	1985
District Curators, Inc., Washington, DC	1985
Hallwalls, Inc., Buffalo, NY	1985
Helena Film Society, Helena, MT	1985
Intermedia Arts Minnesota, Minneapolis, MN	1989
LPL Plus APL, Lewiston, ME	1989
Musical Traditions, Berkeley, CA	1989
On the Boards, Seattle, WA	1985
Real Art Ways, Inc., Hartford, CT	1985
San Francisco Performances, San Francisco, CA	1989
Women & Their Work, Austin, TX	1989
Literature:	
Arte Publico Press, Houston, TX	1983
Associated Writing Programs, Norfolk, VA	1988
Coffee House Press, Minneapolis, MN	1988
Contemporary Arts Educational Project (Sun & Moon Press), Los Angeles, CA (formerly in College Park, MD)	1983
Graywolf Press, Minneapolis, MN (formerly in Port Townsend, WA)	1983
Literary Art Press, Inc. (Persea Books) New York, NY	1983
Milkweed Editions, Minneapolis, MN	1988
Sun Press, New York	1983
Writer's Center, Bethesda, MD	1983
Media Arts:	
Academy of Media and Theatre Arts (AMATA), San Francisco, CA	1983
Asian Cine-Vision, New York, NY	1983
Boston Film/Video Foundation (BFVF), Boston, MA	1983
Center for Contemporary Arts, Santa Fe, NM	1983
Center for New Television, Chicago, IL	1983
Film Arts Foundation (FAF), San Francisco, CA	1983
Film Arts Fund (Anthology Film Archive), New York, NY	1983
Film/Video Arts, Inc. New York, NY	1988
Southwest Alternate Media Project Houston, TX	1988
Museum:	
Albany Institute of History and Art, Albany, NY	1989
Albany Museum of Art, Albany, GA	1985
Art Museum at Florida International University, Miami, FL	1989
Artists Space, New York, NY	1985
Aspen Art Museum, Aspen, CO	1985
Columbia Museum, Columbia, SC	1985
Guild Hall of East Hampton, East Hampton, NY	1985
Huntington Museum of Art, Huntington, WV	1989
McKissick Museum, University of South Carolina, Columbia, SC	1989
Museo de Arte de Ponce, Ponce, PR	1985

Program listing of advancement participant and grantee organizations—fiscal year 1980–89—Continued

Program/organization/city	*Fiscal year*
Museum of American Folk Art, New York, NY	1985
Visual Arts Center of Alaska, Anchorage, AK	1985
Williamstown Regional Art Conservation Laboratory, Williamstown, MA	1989
Wustum Museum Art Association, Racine, WI	1989
Music:	
American Music Center, Inc., New York, NY	1989
Bay Area Women's Philharmonic, San Francisco, CA	1989
Cabrillo Music Festival, Aptos, CA	1984
Canton Symphony Orchestra, Canton, OH	1984
Chamber Music Chicago, Chicago, IL	1989
Chamber Music Northwest, Portland, OR	1984
Colorado Philharmonic Orchestra, Evergreen, CO	1984
Gregg Smith Singers, New York, NY	1984
International Art of Jazz, Stony Brook, NY	1984
Long Island Philharmonic Society, Inc., Huntington, NY	1984
Minnesota Composers Forum, St. Paul, MN	1984
Monadnock Music, Peterborough, NH	1984
New Hampshire Music Festival, Centre Harbor, NH	1989
Oakland Youth Chorus, Oakland, CA	1989
Portland Symphony Orchestra, Portland, ME	1984
Recorded Anthology of American Music d/b/a New World Records, New York, NY	1984
Saint Luke's Chamber Ensemble, New York, NY	1984
San Francisco Chanticleer, San Francisco, CA	1989
San Francisco Girls Chorus, San Francisco, CA	1989
Santa Barbara Symphony Orchestra, Santa Barbara, CA	1989
Speculum Musicae, New York, NY	1984
South Carolina Orchestra Assn., Columbia, SC	1989
South Dakota Symphony, Sioux Falls, SD	1984
Opera-Musical Theater:	
AMAS Repertory Theatre, New York, NY	1983
Anchorage Civic Opera, Anchorage, AK	1983
Boston Lyric Opera Company, Boston, MA	1988
Chicago Opera Theater, Chicago, IL	1983
Kentucky Opera Association, Louisville, KY	1983
Lyric Opera of Kansas City, Kansas City, MO	1983
Music Theater Group (Lenox Art Center) New York, NY	1983
Opera Omaha, Omaha, NE	1983
The Pennsylvania Opera Theater, Philadelphia, PA	1983
Revels, Inc., Cambridge, MA	1988
Sacramento Opera Association, Sacramento, CA	1988
San Francisco Mime Troupe, San Francisco, CA	1988
Theater:	
A Traveling Jewish Theater, San Francisco, CA	1984
At the Foot of the Mountain, Minneapolis, MN	1984
Body Politic Theater (Community Arts Foundation) Chicago, IL	1984
Dell'Arte, Inc., Blue Lake, CA	1989
Ensemble Studio Theater, New York, NY	1984
Eureka Theatre Company, San Francisco, CA	1984
George Coates Performance Works, San Francisco, CA	1989
Honolulu Theatre for Youth, Honolulu, HI	1989
Independent Eye, Lancaster, PA	1984
Mabou Mines Development Fund, New York, NY	1984
Odyssey Theatre Foundation, Los Angeles, CA	1989
Philadelphia Festival Theatre for New Plays	1989
Portland Stage Company, Portland, ME	1984
Red Eye Collaboration, Minneapolis, MN	1989
The Second Stage, New York, NY	1989
Seven Stages, Inc., Atlanta, GA	1989
Teatro del Sesenta, Inc., San Juan, PR	1989
Theater de la Jeune Lune, Minneapolis, MN	1984

Program listing of advancement participant and grantee organizations—fiscal year 1980–89—Continued

Program/organization/city	*Fiscal year*
Theatre Rhinoceros, San Francisco, CA	1989
Victory Gardens Theater, Chicago, IL	1984
Whole Theatre, Montclair, NJ	1989
The Wooster Group, New York, NY	1989
Workshop of the Players Art Foundation (WPA), New York, NY	1989
Visual Arts:	
and/or Service, Seattle, WA	1983
Astro Artz (High Performance) Los Angeles, CA	1988
Creative Time, New York, NY	1983
Fabric Workshop, Philadelphia, PA	1988
Franklin Furnace, New York, NY	1983
Light Work, Syracuse, NY	1988
Los Angeles Center for Photographic Studies Los Angeles, CA	1988
Los Angeles Contemporary Exhibitions (LACE), Los Angeles, CA	1983
New Langton Arts (80 Langton Street), San Francisco, CA	1983
New York Experimental Class Workshop, New York, NY	1988
Nexus Contemporary Art Center, Atlanta, GA	1988
Photographic Resource Center, Inc., Boston, MA	1988
Public Art Works (formerly Inter Arts of Marin) San Anselmo, CA	1988
Randolph Street Gallery, Chicago, IL	1988
San Francisco Camerawork, San Francisco, CA	1988
Social and Public Arts Resource Center (SPARC) Venice, CA	1983
Spaces, Cleveland, OH	1988
Washington Project for the Arts (WPA), Washington, DC	1983

Question. Will this funding level be sufficient to fully implement the Rural Arts Initiative?

Answer. The proposed funding level would allow us to continue supporting those states who receive grants in fiscal year 1989 and make new awards in fiscal year 1990. We do not expect the Initiative to be fully implemented in fiscal year 1990; pending a program evaluation, we hope in future years to add additional states.

Question. Could you please provide a state by state breakdown of the distribution of funds for the Rural Arts Initiatives in fiscal year 1989?

Answer. To date, no grants have been awarded. The first round applications will be reviewed by an Expansion Arts advisory panel in May, 1989; their recommendations will be presented to the National Council on the Arts in August.

NATIONAL ENDOWMENT FOR THE HUMANITIES

STATEMENT OF LYNNE V. CHENEY, CHAIRPERSON

ACCOMPANIED BY:

- **JOHN AGRESTO, DEPUTY CHAIRMAN FOR POLICY**
- **CELESTE COLGAN, DEPUTY CHAIRMAN FOR PROGRAMS/ADMINISTRATION**
- **THOMAS KINGSTON, ASSISTANT CHAIRMAN FOR PROGRAMS**
- **SUSAN METTS, ASSISTANT CHAIRMAN FOR ADMINISTRATION**
- **REX ARNEY, GENERAL COUNSEL**
- **STEPHEN CHERRINGTON, DIRECTOR, OFFICE OF PLANNING AND BUDGET**
- **JASON HALL, DIRECTOR, OFFICE OF CONGRESSIONAL AFFAIRS**
- **MARGUERITE SULLIVAN, COMMUNICATIONS POLICY DIRECTOR, OFFICE OF PUBLICATIONS AND PUBLIC AFFAIRS**

PREPARED STATEMENT

Chairman BYRD. We will now turn to the budget request for the National Endowment for the Humanities.

Testifying for the National Endowment of the Humanities will be Mrs. Lynne V. Cheney, Chairlady of the National Endowment for the Humanities and Chairlady of the National Council on the Humanities.

Mrs. Cheney, would you like to present your associates and then you have a statement that has been provided to the subcommittee, and that will be included in its entirety, and if you would then wish to summarize your remarks, you may then proceed.

[The statement follows:]

STATEMENT OF LYNNE V. CHENEY

Mr. Chairman and Members of the Subcommittee:

I have the honor of once again appearing before this Subcommittee to speak on behalf of the appropriations request for the National Endowment for the Humanities and to discuss with you the programs and activities of the Endowment. For fiscal year 1990, the Endowment requests an appropriation of $153,250,000. This amount will provide a significant level of federal funding for education, research, and public programming in the humanities throughout the nation. Americans from every state and region of the country will be served by the projects our FY 1990 budget will support.

The legislation that established the National Endowment for the Humanities in 1965 declared that it was important for the citizens of a democracy like America to strive "to achieve a better understanding of the past." Just a few weeks ago in his farewell address, President Reagan reaffirmed the wisdom of this declaration and reminded us of the importance of studying the past when he said:

> "If we forget what we did, we won't know who we are. I am warning of an eradication of the American memory that could result, ultimately, in an erosion of the American spirit."

I know that I do not need to convince anyone in this room of the role the humanities can play in helping citizens cultivate historical and cultural understanding. We know that the study and contemplation of history, literature, philosophy, and the other disciplines of the humanities will help to sustain this great experiment in democracy and freedom that we call America.

It is a pleasure, therefore, to report to you that throughout the nation today there is a great blossoming of interest in history and culture on the part of the American public. This is one of the major findings of a report we released last September, Humanities in America: A Report to the President, the Congress, and the American People. The report is based on statistical information collected by the Endowment and on a series of meetings we held in 1988 in Washington and around the country with distinguished scholars, educators, museum professionals, librarians, and other individuals and groups involved with the humanities. The extent of our citizens' curiosity about the themes and subjects that make up the humanities and the rich diversity of programs that have arisen to meet this curiosity are manifested in many ways: by the proliferation of museums, historical societies, and historic sites and the rising attendance at these institutions; by the spread of humanities reading groups in public libraries; by the renaissance and popularity of Chautauqua-style lecture and discussion groups; and by the appearance on the bestseller lists of notable scholarly works such as Joseph Campbell's books on mythology and James McPherson's Civil War history, Battle Cry of Freedom.

The American people themselves are the source of this phenomenon, but the Endowment is proud to have played an important role in contributing to it by directly funding significant humanities projects and programs and by creating the climate for many others to take place. There are still challenges that have to be met, however.

The nation's elementary and secondary schools, for example, need to do a much better job of teaching history, literature, and foreign languages. Educators and administrators should work to return these disciplines to the core of the curriculum, to strengthen the humanities courses their schools now offer, to improve the training of new teachers, and to upgrade the quality and significance of curricular materials.

Like our elementary and secondary schools, many of our nation's colleges and universities also need to strengthen humanities education. The undergraduate curriculum is an area of particular concern. As Humanities in America noted, there are too few requirements on our college campuses: students can graduate from almost 80 percent of the nation's colleges and universities without taking a course in the history of Western civilization; they can earn a bachelor's degree from more than 80 percent of colleges and universities without taking a course in American history; they can graduate from 38 percent of these institutions without taking any course in history. As a result, students all too often graduate without knowledge that can enrich civic and personal life.

And the situation is not getting much better. A recent survey of course requirements of colleges and universities funded by the Endowment and released last week shows that despite the emphasis on undergraduate curricular reform of the last several years, increases in general education requirements in the humanities have been slight at best.

It is also the case that at the same time that public interest in the humanities has grown, study of humanities disciplines has declined among formally enrolled students. Between 1966 and 1986, a period in which the number of bachelor's degrees awarded increased by 88 percent, the number of bachelor's degrees awarded in the humanities declined by 33 percent. Foreign language majors dropped by 29 percent; English majors, by 33 percent; philosophy majors, by 35 percent; and history majors, by 43 percent.

By making grants for significant projects in the humanities, the Endowment will be helping Americans to meet these and other challenges. In FY 1988, for example, we made over 2,100 grants to individuals and institutions in every state of the union plus the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. These projects helped to improve the quality of humanities education in our schools and colleges; preserved the content of endangered humanities books and documents; added to our knowledge of important historical and literary texts, themes, and events; and fostered better public understanding of the humanities. Let me give you some examples of significant projects that have recently received funding from NEH:

-- The American Library Association (ALA) received a grant of $358,000 to conduct a series of reading and discussion programs in 25 states based on "Voices and Visions," the NEH-supported television series about the work and lives of 13 American poets. Some of the libraries that are participating in the program include Kingwood Public Library in Kingwood, West Virginia; The Logan Library in Logan, Utah; Tucson Public Library in Tucson, Arizona; Southeast Arkansas Regional Library in Monticello, Arkansas; Noxubee County Library in Macon, Mississippi; and Richards Free Library in Newport, New Hampshire. The programs at each site include screenings of the series, lectures by scholars, poetry readings, and scholar-led discussions. In addition, annotated reading lists, copies of the poems, critical essays, and biographical sketches have been prepared for use by each participant. Through this national project, the ALA hopes to attract a large out-of-school adult audience to the work of major American poets;

-- Marshall University in Huntington, West Virginia received $145,376 in funding in FY 1988 to support a four-week summer institute and follow-up activities on the subject of the Roman family in ancient history and literature. The thirty local school teachers and ten teachers from outside the area who attend the institute will broaden their knowledge of ancient Rome and improve their ability to teach the classics in their schools;

-- NEH awarded $60,000 to the Nevada Humanities Committee to support a special year-long program of lectures, conferences, reading and discussion groups, and rural school programs on works written by and about native Americans;

-- In FY 1988, Arizona State University received $144,215 to support a six-week summer institute on Cervantes's Don Quixote for 24 teachers of history, literature, and art history from two-and four-year higher education institutions in the region. The objective of the institute is to deepen these teachers' understanding of this seminal seventeenth-century text, a book that is often omitted from college courses on Western literature because many humanities faculty do not feel fully qualified to teach it;

-- Through the Endowment's Challenge Grants program, funds totaling $112,500 were released to the College of Idaho in Caldwell to support a fund for library acquisitions in the humanities, an endowment for faculty development, and an endowed chair in the Department of English. NEH support is being matched on a three-to-one basis by nonfederal donations to the college for these activities;

-- The University of Arkansas in Pine Bluff, a historically black college, received $54,193 to conduct a workshop for English faculty who teach world literature to sophomores. In order to provide students with a common core of knowledge in the humanities, the university recently established a two-semester World Literature requirement for second-year students. The workshop is designed to refresh the faculty's familiarity with key texts used in the courses including works by Homer, Sophocles, Confucius, Dante, and Shakespeare;

-- The Mississippi Department of Archives and History was awarded $26,317 in FY 1988 to continue preservation microfilming of historically significant Mississippi newspapers. This project is part of the national U.S. Newspaper Program--supported in the Endowment's Office of Preservation--which makes awards to institutions in individual states to locate, catalogue, and microfilm their newspaper holdings and thus to preserve resource materials critical to current and future humanities researchers and scholars;

-- Tulane University received $65,057 in FY 1988 to conduct a summer seminar for school teachers on the realist fiction of American writers William Dean Howells, Henry James, Theodore Drieser, Kate Chopin, and Edith Wharton. A summer of intensive study and discussion of selected works by these authors will help teacher-participants broaden their knowledge of their works and thus provide more content to their classroom teaching; and

-- The Museum of International Folk Art in Sante Fe, New Mexico was awarded a grant of $300,000 from the Endowment in FY 1988 to install a major long-term exhibition that explores the culture of Hispanic New Mexico from a historical perspective.

The Endowment will continue to encourage and to support humanities projects of the scope and depth represented by these grants. In addition to our grant-making activities, however, there are other ways the Endowment fosters expansion of the humanities throughout the United States. For example, in the spring of 1988, the Endowment compiled and issued a list of extracurricular readings recommended for elementary and secondary school students. Published as a small poster suitable for displaying in school classrooms, the list, "Summertime Favorites," contained almost 400 titles of books that have stimulated and delighted young people for decades. Our hope is that students will use "Summertime Favorites" as a guide to quality books that they can read on their own during summer vacations. The Endowment believes that by engaging in extracurricular reading students not only will perform better in school but also may be encouraged to make the reading of good books a regular and important part of their lives. Copies of "Summertime Favorites" were mailed to every school superintendent, chief state education officer, and public library in the nation; all members of Congress also received copies. Nearly 135,000 additional copies were distributed to interested parties that requested copies from the Endowment.

To expand the reach of our programming, in FY 1990 we will continue our special "Access to Excellence" program, which is administered by the Division of Education Programs but is applied throughout the agency. The primary objective of "Access to Excellence" is to make individuals and groups that may not be familiar with our programs more aware of them and to encourage applications for grant support from geographical areas where application volume has been disappointingly low. Now in its third year, the program continues to provide high visibility for the Endowment nationwide in minority and tribal communities in rural and inner-city America. The coordinator has visited 46 states and 3 territories, making presentations to schools, colleges, museums, libraries, professional groups and associations, and state and local governments. He has also sent out over 25,000 mailings describing Endowment grant opportunities to groups and individuals.

In an effort to broaden and sustain the growth of public interest in the humanities that I described earlier, we have developed a number of special emphases in our general audience programs. The Division of State Programs, for example, in addition to making funding available to the 53 state humanities councils to support over 5,000 grants in both FY 1989 and FY 1990, will sponsor a meeting this spring of the chairs and executive directors of the councils to highlight some of the most successful public programs developed by the states. The dissemination of such information will be a catalyst for continued improvement of projects for general audiences. And, in the Endowment's Division of General Programs, we will encourage the submission of proposals to mount large-scale collaborative projects that will be able to reach large numbers of people with quality humanities programming.

The Endowment believes that scholars and other humanities professionals who engage in public activities on behalf of the humanities should receive more encouragement and recognition for their efforts. Accordingly, we have recently established the Charles Frankel Prize, which will acknowledge the work of individuals who have made major contributions in helping generalaudiences develop greater understanding of the important texts and ideas of the humanities. The Frankel Prize will be awarded to up to five individuals; we expect to announce the first recipients of this honorary award in the spring of 1989.

In the area of humanities education, in FY 1989 and FY 1990 the Endowment will be continuing several recent special initiatives. The NEH/Reader's Digest Teacher-Scholars program, for example, which we established in 1988, will provide sabbatical leave opportunities for elementary and secondary school teachers to increase their knowledge of the subjects they teach by spending up to one year pursuing independent study and research in the humanities. Reader's Digest donated $1.5 million--from a fund established by its founder, DeWitt Wallace--to support one-third of the cost of these grants over three years. The program grew out of a report the Endowment released in 1987, American Memory: A Report on the Humanities in the Nation's Public Schools, which concluded, among other things, that students benefit most when their teachers have a mastery of their disciplines and are themselves actively engaged in learning. The Endowment received 615 applications for the program's initial competition, and last Tuesday we announced 53 awards to teachers from every state, the District of Columbia, Puerto Rico, and the Virgin Islands.

In the past year, the Endowment also established a history center to facilitate better teaching and learning of this important subject in elementary and secondary schools. We have entered into a cooperative agreement with UCLA, which is housing the Center, to operate a three-year program of research and study focused on the teaching of history in precollegiate institutions. NEH is providing UCLA with approximately $500,000 per year through FY 1990 to help support the Center's activities.

In FY 1989 and FY 1990, the Endowment will again invest a major portion of its funding in projects that advance humanities research and scholarship. In our Fellowships and Research divisions, a number of special emphases also are planned to widen the opportunities for humanities scholarship beyond the traditional university setting. For example, we will make special efforts to encourage applications from scholars at historically black colleges and universities and at two-year colleges, as well as from scholars and researchers who are not affiliated with higher education institutions. We will also try to generate more proposals to conduct summer seminars for college teachers at museums and libraries to complement the summer seminars that are held on university campuses. And, in the Research division, we will be encouraging efforts for scholars to make their work more accessible to non-specialists and to other general readers.

The preservation of humanities research resources has been one of the major concerns of the Endowment in recent years, and this emphasis will continue in FY 1990. Last year, at the request of Congress, we developed a multi-year plan for accelerating efforts to combat the brittle books crisis--as well as other preservation concerns--in the nation's research libraries and other resource repositories. The plan we presented to you is running on schedule: The applications we have received for FY 1989, and those we anticipate for FY 1990, should achieve the number of filmed volumes targeted in our plan. NEH staff have been in close contact with the preservation field and with other agencies--especially the Library of Congress--as we have moved forward.

Finally, in FY 1989 and FY 1990, the Endowment will continue to encourage grantees to supplement federal funds with donations from third-party givers. Through our Challenge Grants program and our Treasury funds mechanism, we are authorized to match private gifts to our grantees. Our matching awards not only stimulate giving, they have the added benefits of encouraging projects and institutions to build a wider base of support and interest in their communities and to bring their humanities activities to the attention of general audiences.

In FY 1990, a number of special emphases will be implemented in the Challenge Grant program. For example, the program will encourage museums, libraries, and other general audience institutions to establish endowments to support internships for scholars, graduate students, and recent doctorate recipients in the humanities. The Challenge program also will make a special effort to increase the number of applications from historically black colleges and universities.

I would be happy now to discuss our FY 1990 appropriations request or to answer any questions you may have about the Endowment's activities.

INTRODUCTION OF ASSOCIATES

Mrs. Cheney. Thank you, Mr. Chairman. It is a pleasure to be here today. I have with me at my far left, John Agresto, who is Deputy Chairman for Policy at the Endowment. At my immediate left, Celeste Colgan, who is Deputy Chairman for Programs and Administration of the Endowment, and to my right, Steve Cherrington, who directs our Office of Planning and Budget.

OPENING REMARKS OF LYNNE V. CHENEY

I have presented the committee with opening remarks. As you can see from those remarks and in the budget we submitted, we are requesting $153,250,000 for fiscal year 1990. This is an amount that is relatively even with what we were appropriated last year. It does not reflect any significant growth, but we believe that with this budget, we can provide significant and important levels of support for research, public programming, and education in the humanities.

Like the Arts Endowment, over the past 2 years, we have submitted two reports to the Congress, and there has been some very good news in those reports in some ways. The very good news is that the American people do seem to be showing renewed interest in learning about the humanities. They are studying history, literature, and philosophy and learning about the past. Museum attendance is up. Historical societies are being organized as we speak. The Humanities Councils in each of our States are doing a wonderful job of reaching more and more people with programming in the humanities.

So there is good news to report. There is also news that is perhaps less positive, and it generally has to do with our schools. We have not done as good a job in our schools as we should at teaching history, literature—foreign languages, in particular. A survey that the Endowment funded in connection with its humanities education report, called "American Memory," shows that two-thirds of our youngsters, for example, cannot tell you within the correct half century when the Civil War occurred. It showed that almost 40 percent can't tell you when the Constitution of the United States was written. The numbers are about the same when youngsters are asked to date World War I.

So there are significant difficulties with the teaching of history and literature and foreign languages in our schools. Our colleges and universities also have some difficulty with the teaching of the humanities. There is curricular disarray in our country, the Endowment has noted—as have many observers. It is possible to graduate from almost 80 percent of the colleges and universities in this country without taking a course in the history of Western civilization. It is possible to graduate from more than 80 percent without taking a course in American history, from 38 percent without taking any course in history, from more than three-quarters of our colleges and universities without studying foreign languages.

So there are some challenges to be met as well as some areas of strength on which we at the Endowment wish to build. We request $153,250,000 for fiscal year 1990 believing that this amount will help us not only to meet the challenges that we have identified but to build on the real strength that exists as well.

I would be happy now to answer any questions.

HUMANITIES EDUCATION

Chairman BYRD. Well, your statistics are alarming. We have been reading about these in the newspapers, and it is just unbelievable. How are we going to deal with this situation and stimulate a greater interest in history, philosophy and the humanities, and a greater inclusion of these in the curricula?

Mrs. CHENEY. The problem is exceedingly complex, as you all are aware. I know that the members of this committee have paid a great deal of attention to this problem. Some days I wake up, and I think the problems are so complex that perhaps it would be better to go back to bed than to try to face them that day, but when I am in my most upbeat and optimistic mood, I think that the key to much of what is wrong is teachers—not that the teachers themselves have anything wrong with them, but that we have failed in the way that we prepare teachers to teach in our schools. And we have failed by not giving teachers sufficient opportunity to become knowledgeable about the subjects they teach, especially in our elementary and secondary schools.

One of the efforts that we undertook to follow up on the report, "American Memory," was a program that we secured some support for from a fund at New York Community Trust established by DeWitt Wallace, founder of Reader's Digest. It provided $1.5 million in funding to help us over a 3-year period to pick each year one teacher from each State who would be given an opportunity to spend a year in study becoming more knowledge about his or her subject.

Teachers, I think, are the key. Teachers are the key at the elementary and secondary level. Teachers are also the key in our colleges and universities. The situation as it exists now in our colleges and universities is that there is little reinforcement or reward for good teaching. We have developed a situation in which professors receive tenure, promotion, and reward, according to publication as opposed to according to whether or not they are effective teachers. That situation, we think, needs to change too.

Chairman BYRD. "According to publication," now what does that mean?

Mrs. CHENEY. When it comes time for decisions to be made about salary, about who will have tenure and so on, quantification is sometimes the easiest route to follow: look down a professor's record, see how many articles that professor has published, see how many books that professor has published or edited. That is sometimes an easier way to judge, a seemingly more objective way to judge, than whether or not that teacher has been inspiring in the classroom, whether or not that teacher has students who feel that they have had their eyes opened to the past, to literature, to foreign languages, as a result of his or her teaching.

So we think that teaching is the key there, too. The problem is very complex, but I do think that by focusing on teachers, we can do a great deal to help bring about the change that's needed.

Chairman BYRD. We have all been aware of the fact that Japanese students and Germans and others seem to be so far ahead of our own students in math, science, physics, foreign languages, and so on, and from what you are telling us here, it looks as though we have had a breakdown all along the line.

Mrs. CHENEY. I think it is safe to say that we also lag behind in the teaching of the humanities. Typically, Japanese youngsters will study a foreign language from the latter part of elementary school on through every single year in school. Typically, Japanese youngsters will study literature every year. Typically, Japanese youngsters will study history every year.

I am sorry to say, I am afraid it is the situation that we do not do that in the schools in our own country.

NEH/READER'S DIGEST TEACHER-SCHOLAR PROGRAM

Chairman BYRD. The Endowment announced 53 school teachers as recipients of grants to begin a year of independent study recently in history, literature or foreign languages, and I believe you just alluded to it——

Mrs. CHENEY. Yes.

Chairman BYRD [continuing]. To this program. The Reader's Digest magazine is contributing approximately one-third of the cost of the program. This perhaps is a prime example of the cooperative nature of the Federal and private aspects of the Endowment's programs. But there is a statement in the budget justification, and I quote:

> Providing that enough qualified applications are submitted, the Endowment will continue to make one teacher-scholar award for each State, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

As I understand it, the Endowment received 615 applications for the program for fiscal year 1989 and projects 750 applications for fiscal year 1990. That sounds like a pretty good response for a relatively new program.

Do you believe that the quality of the applications will be a problem? How many applications have come from the State of West Virginia?

Mrs. CHENEY. I am going to have to look around here and see if someone knows about West Virginia. We will have to submit that information for the record.

[The information follows:]

TEACHER-SCHOLAR APPLICATIONS FROM WEST VIRGINIA

We received nine applications to the NEH/Reader's Digest Teacher-Scholar program from the State of West Virginia.

Mrs. CHENEY. It is very difficult in beginning a program to make sure that enough people know about it. The language that you quoted describing the award was basically there in case nobody applied from Wyoming or West Virginia or Idaho or Mississippi. We didn't want to be in a position of having to offer an award if there were no applications or if we received only one or two applications and they were not good ones. We have had a great deal of help, particularly from the State humanities councils in publicizing this program widely. I think we are out of the woods. I think that we can say that in the next 2 years of the program, we will have many fine applications from each State from which the awards can be made.

Chairman BYRD. What steps are you taking to help address what are determined by the panels to be deficiencies in the applications?

Mrs. CHENEY. During the first year of the program our fine staff at the Endowment found themselves completely absorbed by implementing a new program, getting it in place, being sure that word was out to teachers in every State about this program. What we hope to do in the next 2 years is to enable the staff to work with applicants in this program as they have worked with applicants in other programs. It often happens—I know that members of this committee share my concern about it—that in urban areas where there are large cultural centers, people simply know the ways of the Endowment better than they do in rural areas, in places where there has not been as much experience in applying to our programs.

To counteract that, across-the-agency, we try to offer staff help in the development of applications. We make available to people examples of applications that have been successful at the Endowment so they get an idea of the kind of detail that our panelists look for. We suggest to them areas in which applications need strengthening. We suggest to them the kinds of letters that might be sent to accompany an application. We hope that we will be able to pay that same kind of attention to this new program as we pay to other programs at the Endowment.

Chairman BYRD. Is Reader's Digest interested in expanding the program?

Mrs. CHENEY. No, sir; they have not indicated an interest in expanding it. We have been quite grateful to them for being willing to be so generous with their funding. I can say that I have also noticed that perhaps we have been able to raise the corporate consciousness of the DeWitt Wallace Fund and Reader's Digest to the importance of private participation in education. I noticed two press releases recently about other educational efforts that they are undertaking, one in which they recognize heroes of education, people who are in the schools doing fine work. Reader's Digest will give them awards for their efforts.

Chairman BYRD. How do the teacher-scholars share their experiences at the end of their year?

Mrs. CHENEY. Since we just made the first awards, I can only speculate about how I think this will happen. We have other programs at the Endowment similar to this that bring teachers together to learn more about the subjects that they will teach. Typically, they go back to their schools and become a resource for other teachers. They go back to their schools with new ideas about the curriculum, for example. They go back to their schools with new ideas about resources that can be brought into the classroom. Also, though we have not formally encouraged this as much in the past as we intend to in the future, we have noticed that these teachers stay in touch with one another. It is such an uplifting experience for someone who has been in the classroom a long time, and perhaps has not been reinforced for the kind of intellectual activity that he or she loves, that after being brought together with like people—with other teachers who are also interested in reading more deeply in history or literature, for example—these teachers tend to stay in touch and to form networks that benefit them in the years beyond their formal award.

YOUNGER SCHOLARS

Chairman BYRD. The Fellowships and Seminars Division offers the Younger Scholars Program that provides high school and college students with an opportunity to carry out independent research in writing projects during a 9-week period in the summer. The application trend has been upward, with fiscal year 1990 applications projected to increase roughly 12 percent. Funding for the program, however, is proposed at the same level.

Would additional funds enable the Endowment to help more young people or are there other constraints on the program?

Mrs. CHENEY. I am happy to see the growth in applications. I think that the program is probably now at the size it should be. If there were extra funds to be made available to the Endowment, I can think of some other places that I would choose to put them first. This is, however, a fine program. These young people undertake some of the most amazing projects.

[Pause.]

There is a project that I can't identify fully because an announcement hasn't been made yet, but let us say it is from a Western State that some of us here love very much. [Laughter.]

It involves a young scholar, a young man in high school who just has amazing knowledge of classical languages, who is looking at word play in Vergil. It is the most sophisticated effort. He is working with a fine mentor. He is from a rural area.

These projects are very heartening, partly because they do tend to recognize these stars, these rising stars of the future, who are in areas that we don't always expect to find them.

GENERAL EDUCATION REQUIREMENTS

Chairman **Byrd**. The Endowment has expressed concern about the fragmentation of the humanities in introductory and general education courses.

What do you mean by that, and what is the extent of the problem, and what is the cause?

Mrs. **Cheney**. I think it is a very severe problem. General education is that part of the curriculum that is set aside, that is not the major or the minor; it comprises the courses that students are supposed to take to give them general and comprehensive knowledge. That is the part of the curriculum in which students should study Western civilization. That is the part of the curriculum in which you should get a comprehensive view of other cultures. That is the part of the curriculum in which they should study foreign languages and in which they should have a basic math course, a basic science course, a course in music, a course in art.

Across the country, instead of mandating specific courses in general education, what colleges and universities tend to do is set in place something called distribution requirements. They say: "Take three courses from this list, take two courses from that list, and take one course from this list." I was looking at one large midwestern university that had 900 courses to choose from. They ranged from "Sensation and Perception" to "Dance History" to "Latin American Societies in Transition." All of them are doubtless valuable courses to take, but none of them are courses in general education. None of them give the comprehensive kind of knowledge you need as a framework on which to add more specialized kinds of learning. So that is the problem with general education. It is the area in which we see organizational problems that account for being able to graduate at 37 percent of our colleges and universities without taking any course in history, for example.

It is a problem that is complex in its causes. One difficulty is that there is nobody in charge of it. Nobody in our colleges and universities is reinforced or rewarded for addressing this problem. On the whole, people are reinforced and rewarded for doing specialized research and publishing the results, and that is very important. But what it means is that the whole academic profession is rewarding people in that direction rather than rewarding people for the kind of broad scholarship that is necessary for courses in general education, which are a very essential component of college education.

NEH'S RESPONSES

Chairman **Byrd**. What is the Endowment for the Humanities doing for that or what can the Endowment do for that to make more clear the need for mandatory study of history, philosophy, literature, et cetera?

Mrs. **Cheney**. We have tried to draw attention to the problem. I sometimes think that one of the best purposes we can serve is to foster debate, to cause people to grapple with the problem. We can't mandate a solution to it. It wouldn't be the proper role of the Federal Government, but we can bring attention to it. We did that, I think, to some extent with our report, "Humanities in America."

I think we did it again when we released the results last week of a survey that we did about general education requirements. That survey showed those figures that I was citing earlier and gave some detailed explanation of them. It is not just in the humanities that the problem exists. It is possible to graduate from about 50 percent of our Nation's colleges and universities without ever studying mathematics, from more than one-third without ever taking a course in natural or physical sciences.

So I hope that by providing information that makes the point about the deficiencies of general education in a dramatic way, we can help foster the debate among faculty, which is where the problem will be solved, about how the problem can be solved.

ACCESS TO EXCELLENCE PROGRAM

Chairman BYRD. The Access to Excellence Program encourages applications for grant support from geographical areas where application volume has traditionally been low.

What changes have you experienced in this area since the inception of the program?

Has there been a percentage change in the geographic distribution of applications? What about small versus large organizations in these areas?

Mrs. CHENEY. I am not sure I could point to figures that would show where there has been a change. What I can tell you about are specific instances in which our access to excellence coordinator has gone to Mississippi or to Idaho or to West Virginia and talked with rural educators, for example, talked with tribal councils, talked with groups in the inner city, talked with them about the grant possibilities that the Endowment offers and, indeed, fostered applications that would not have been sent to us otherwise. And some of those applications have been funded.

So I am not sure that I can give you the precise answer to your question that you want, but I can tell you that I have anecdotal evidence that this young man, Carl Dolan, who is our access to excellence coordinator, is out there driving thousands of miles, as we speak, across sparsely populated areas of the Nation. He has had a positive effect on people's perception of the grant opportunities that the Endowment offers and has, indeed, fostered applications that have resulted in projects being developed in those areas.

Chairman BYRD. What experience have you had with regard to West Virginia applications?

Mrs. CHENEY. I can tell you that 44 percent of the applications in from West Virginia were funded in 1987, the 1988 figures aren't available yet. This is in comparison with an overall Endowment average of about 1 out of 3 applications in 1987 being funded. That year the overall percentage was particularly high. Usually, the proportion would run more like 1 in 4, 1 in 5.

We had a wonderful program in fiscal year 1987 called the Bicentennial Bookshelf, which made small grants to public libraries—many of them in West Virginia and many in the West and the South as well—whereby libraries received $500 grants to buy books on the U.S. Constitution and the Constitutional period. So the award ratio for fiscal year 1987 was relatively high.

I can tell you that our access to excellence coordinator has been at Concord College in West Virginia, he's been to Logan County schools, he has visited with the West Virginia Education Association, Alpha Regional Library, Parkersburg Community College, the Virginia Department of Education, Bluefield State College. The list goes on and on.

Chairman BYRD. You mean the West Virginia Department of Education.

Mrs. CHENEY. Exactly. I'm sorry. I skipped the end of the last line. Right. West Virginia Department of Education.

Chairman BYRD. How recent is this?

Mrs. CHENEY. This is October 4 and 6, 1987; he had another trip on September 22 and 23, 1988.

Chairman BYRD. In terms of dollars, what is your experience with West Virginia?

Mrs. CHENEY. Mr. Cherrington, do you have that?

Mr. CHERRINGTON. Yes, I do.

I think it is about $400,000 in fiscal year 1987.

Mrs. CHENEY. And $535,346 were obligated to West Virginia in fiscal year 1988. I would say, Mr. Chairman, that I visited West Virginia—I'm trying to remember how long ago it was now—and your State humanities council had a fine program on the Constitution that was beamed to locations throughout the State, and it was very well done. In "Humanities in America," the report that I mentioned before, I also mentioned something happening in West Virginia that the Endowment can take no credit for. Many things happen in the humanities that the Endowment can't take credit for. I think it is part of the burgeoning interest we see in the humanities across the country. But there is a wonderful organization in Shepherdstown, WV. It is called the Rumseyian Society. And this is a group of West Virginians who have decided that a fellow named Rumsey has not gotten as much credit as he should for the invention of the steam engine.

Chairman BYRD. The steam boat.

Mrs. CHENEY. Exactly. They have built, as you probably know well, a steam boat according to plans that they found in his diary. They haven't got it to work completely yet. [Laughter.]

But it is looking very promising, and it is a project that I like so much, because it shows individuals coming together and spontaneously learning about the past.

PUBLICATION SUBVENTION CATEGORY

Chairman BYRD. The Publication Subvention Program makes grants to presses to ensure the dissemination of works of scholarly distinction in the humanities. For fiscal year 1990, NEH is proposing to change the program's guidelines to a focus only on the significance of the work. In the past, another consideration was that the press would incur a substantial deficit to publish the work.

Why does NEH no longer consider this to be a valid criterion?

Mrs. CHENEY. This is a program that was making me unhappy and it was making the presses that apply to the program unhappy. My difficulty with the program was that by having to judge applications on the basis of need, we were constantly finding ourselves having to choose to fund the publication of books that would go to very small audiences, 200, 300 scholars, as opposed to being able to fund equally excellent scholarly projects that would reach, say, 1,000 people or 1,100 people. I felt very uncomfortable with the Endowment always having to make those grants for books that reached the smallest audiences, about our not being able to fund books that would bring information about the humanities that is valuable to more people.

So that was my difficulty with the needs test. The presses, on the other hand, were constantly being frustrated by what they thought was a very arduous application process for a very small grant. The Publication Subvention grants run around $7,000. The presses were having to fill out these greatly detailed budgets and make their case, and we would then second-guess them on their budget. Everybody seems to be happier with this new system. The grants will be for a fixed amount, $7,000. No need will have to be established; the funding decision will simply be made on the basis of excellence. It is my theory that presses are not going to go to all of this trouble for $7,000 unless there is indeed a necessity for this kind of help.

Chairman BYRD. What impact would this have on the small university presses that have traditionally received funding under the program?

Mrs. CHENEY. I suspect that there will be no impact on small presses as opposed to large presses at all. Perhaps it might have a positive impact, however, since large presses tend to have the kind of development officers attached to them who can undertake the more arduous application procedure we had before. I suppose you could say that the old system favored large presses that had someone who could put time against this problem, and that the newer procedure may be more equitable, since it will result in a streamlined procedure for everyone.

Chairman BYRD. Again, the Endowment expresses concern that the quality of applications will improve under the new guidelines, yet an increased number of awards are projected from fiscal year 1988 to fiscal year 1989 under the old guidelines. How can this be explained?

Mrs. CHENEY. Actually, the fiscal year 1989 awards will be made under the new guidelines. Copies of the revised guidelines are now available, and presses will be using them to prepare the next cycle of applications, which are due by April 1. The applications will be evaluated in the Endowment's peer review system, and fiscal year 1989 awards will be announced later this summer.

Since we think that the quality of applications should be improved under the new guidelines, we are prepared to make more awards in fiscal year 1989 than we made in fiscal year 1988.

Chairman BYRD. Have any schools in West Virginia received funding under this program?

Mrs. CHENEY. We will have to supply that information for the record.

[The information follows:]

PUBLICATION SUBVENTION GRANTS AND WEST VIRGINIA

No schools or other institutions in West Virginia have received funding in the Publication Subvention category. In fact, the category has never received an application from an institution in West Virginia.

PUBLICATION SUBVENTION GRANTS CHART

Chairman **BYRD**. And would you supply a chart for the Nation.

Mrs. **CHENEY**. You would like information about all presses that have——

Chairman **BYRD**. Yes.

Mrs. **CHENEY**. We will be happy to do that.

[The information follows:]

Publication Subvention Grants, by State—fiscal year 1988

	Amount obligated [1]
California	$65,668
Connecticut	3,000
Hawaii	34,700
Illinois	37,275
Iowa	1,650
Kansas	12,000
Louisiana	12,298
Massachusetts	29,582
Maryland	31,950
Michigan	2,422
Missouri	8,680
Nebraska	10,000
New Hampshire	6,318
New Jersey	10,682
New York	22,662
North Carolina	27,931
Oklahoma	10,000
Pennsylvania	10,000
Washington	18,600
Total	355,418

[1] Includes definite and Treasury funds obligated for new grants and supplemental awards on previous years' grants.

CORPORATIONS AND LIBERAL ARTS MAJOR

Chairman **BYRD**. Senator McClure.

Senator **McCLURE**. Thank you very much, Mr. Chairman. I have a number of questions which I will submit for the record.

I do want to take the time for just a couple of areas of inquiry, one of which is rather general, another one of which is rather specific.

Your justification on page 5 indicates that between 1966 and 1986, the number of bachelor's degrees increased 88 percent. During the same time period, however, the number of bachelor's degrees awarded in the humanities area declined by 33 percent. Foreign language majors dropped 29 percent. English majors dropped 33 percent. Philosophy majors dropped 35 percent. History majors dropped 43 percent.

In recent years, many corporations have increased their efforts to hire more liberal arts graduates. Some have a theory that those with a liberal arts degree are more open-minded and easier to train.

Would you agree with that theory?

Mrs. CHENEY. I think that there are clear professional advantages that broad training in the liberal arts offer. I sometimes speak of those advantages in terms of perspective and judgment—a young person who understands that things happening today aren't happening for the first time in human history has an advantage, a kind of stability, an anchoring that a young person without that knowledge doesn't have. And this case has been made eloquently by some spokesmen for American business. I think of Roger Smith, for example, who at least once a year delivers a very fine speech about how his own company and how American corporations in general, benefit from employees with broad training in the liberal arts.

Senator McCLURE. Well, I fully appreciate your efforts to improve and increase the humanities curriculum in our Nation's colleges. Unfortunately, simply increasing the requirements of the undergraduate curriculum may not increase the interest in the humanities. For a great many of their studies, they end up their college years with a large student loan debt to pay off. The name of the game for them is getting a job.

How have you coordinated efforts with corporations to sell them on the value of liberal arts students?

Mrs. CHENEY. Well, I think about this matter as often as I can and, in fact, have had conversations with corporate executives about it. You are right. Forcing someone to take a freshman course in Western civilization may not show that young person the value of further study in the humanities, but it does seem to me that in some ways it may be a necessary cause. It may not be a sufficient cause. It may not hook them, you know, so that they have the kind of broad liberal arts education I would like to see all young people have, but if they aren't ever exposed to good teaching in the humanities, then they certainly aren't likely to study further.

IMPORTANCE OF GOOD TEACHING

Senator McCLURE. You did mention good teaching.

Mrs. CHENEY. Yes.

Senator McCLURE. And that qualification wasn't necessarily there in putting a requirement in a curriculum.

Mrs. CHENEY. One has to hope that good teaching will occur, and one has to do whatever can be done to see that teaching is valued in higher education, as it should be and all too often isn't now. But there are many fine teachers, both in our colleges and our universities, and maybe to take all the qualifiers off that statement, I think you could say if they never take a course—if students never have a required course in the humanities as undergraduates, they are unlikely to study them. If that course is well-taught and imaginatively conceived, the odds will, of course, improve that they will take additional humanities courses.

Senator McCLURE. I certainly agree with that latter statement. I have seen a lot of required courses that are just as boring to the students as they are to the professors.

Mrs. CHENEY. One of the important aspects of curricular reform that I think not enough public attention has been paid to, but we at the Endowment are certainly aware of is the necessity for faculty development to accompany curricular reform.

Senator McClure. Thank you. That is exactly what I was getting at, because I think unless you have professors that really are turned on by the subject they teach, they are not going to turn on the students.

Mrs. Cheney. I was just looking at a long-term curricular revision that is in place in a large Southern State in the South. They are putting into place a humanities foundation course, a social science foundation course, and a science foundation course. An important aspect of the humanities foundation course is a series of 3-week seminars supported by the Endowment for faculty members who will be teaching that course. They come together. This is a Western civilization sequence. The class read the "Iliad," and they all discuss the "Iliad." Now these may be people who are used to teaching Shakespeare or perhaps Emily Dickinson, but now they are going to teach the "Iliad". And that kind of involvement in the process, talking about that book, is crucial to the dynamism of the course that will be taught by these faculty members.

Senator McClure. Well, I don't know how far that can go in general education, but I do know that two of our children were exposed to that at the high school level a number of years ago, and I think it made some difference in the direction that they may have taken in their own lives; however, that kind of course is ordinarily thought to be an enriched course for those who are most competent and capable in the school and not for general education.

Mrs. Cheney. And that is unfortunate; what is good enough for the best is good enough for everyone.

NEW YORK PUBLIC LIBRARY

Senator McClure. I want to turn to a specific case, not because I want to overemphasize it, but because it is the kind of thing that disturbs me and I think some other members of this committee. Occasionally, we see large grants going to specific large institutions. I want to refer to the New York Public Library for a moment.

In May 1988, the National Council on the Humanities awarded one of the largest sums in its history by voting the New York Public Library a $1 million 1-year award to be matched at a ratio of 4 to 1. Now that is not as much as they asked, because they asked for a 3-year $6 million grant and only got a 1-year $1 million matching grant. However, that brings the total of operational support for the New York Public Library since 1972 to over $24 million.

In making this award, the Council also indicated that this would be the last award for the New York Public Library which is outside the scope of the rules and guidelines affecting all other institutions and individuals who apply to the Endowment. The New York Pubic Library is encouraged to apply through the regular competitive categories established by the Endowment.

If I, at some point, make a misstatement of what you have done, please interrupt.

Can you explain why the Council initiated these grants to the New York Public Library when they are for operations, and are neither specific projects nor competitive awards?

Mrs. CHENEY. I would like to note that that was done many years ago in the early 1970's, when there was some concern, quite legitimate concern, that the New York Public Library would go under. I'd also like to note that this is a fine institution, a resource not just for New York City but for the Nation, and the NEH was concerned it would have to close its doors. It was at that time that this series of extraordinary grants was begun. It was carried on for many years. It is no longer being carried on. There are people who are unhappy about that. I detect from the tone of your questioning that you think it was a good idea that the Endowment brought an end to this. But not everyone thinks so.

This is a rather controversial undertaking on our part. I think we have now got everyone understanding that the Endowment's resources are for the Nation, that it is not proper for us to have an extraordinary relationship with any one institution no matter how meritorious that institution might be. And let me say the New York Public Library is a meritorious institution and that, indeed, an institution that has displayed the excellence that New York Public Library has will do very well through our regular competitive programs, and that therefore, the noncompetitive relationship should cease.

Senator McCLURE. During those 16 years while they were getting operational support, was the New York Public Library the only library receiving operational support?

Mrs. CHENEY. So far as I know. Mr. Cherrington says yes.

Senator McCLURE. Was it the library with the most need for operational support?

Mrs. CHENEY. That is a very hard conclusion for me to be sure about. I can say to you that there is something very special about the New York Public Library. They try to be a library of record. There aren't many institutions in this country that try to be a library of record. They collect everything that is important to be collected so that a scholar who needs to know something about Poland or East Asia or whatever can be sure to find it at that library.

At the same time, the library is sort of an orphan. It is not connected with a large institution of learning like the grand libraries at University of California at Berkeley are for example. It exists as a national resource that lacks that kind of institutional base that other great libraries depend on. So there were unusual situations that I think justified what the Endowment did over the course of a decade and a half.

Senator McCLURE. But now you have decided that it no longer justifies it.

Mrs. CHENEY. Now the New York Public Library is simply not in danger of shutting its doors. That is not to say that its financial life is going to be easy. I think it is probably safe to say that the financial life of no research library is going to be easy in the years ahead, but it did seem as though the very extraordinary circumstances that justified the anomalous relationship NEH had with the New York Public Library have ended.

Senator **McClure**. I will submit the balance of my questions, Mr. Chairman.

Chairman **Byrd**. Are operational costs being shared with any other libraries in the country?

Mrs. **Cheney**. No, sir.

Chairman **Byrd**. Will you submit for the record tabulations for the 50 States showing how the resources are spread through each of the States?

Mrs. **Cheney**. I will be happy to do that.

Chairman **Byrd**. And make it cover the last 5 years.

[The information follows:]

SUMMARY OF GRANTS AND AWARDS BY STATE

[Fiscal year 1988 [1]]

State	Number of projects	Amount obligated
Alabama	21	$1,726,156
Alaska	7	644,583
Arizona	22	1,276,211
Arkansas	11	1,256,343
California	175	10,988,568
Colorado	20	1,799,253
Connecticut	52	2,636,810
Delaware	9	924,857
District of Columbia	62	5,532,322
Florida	25	1,234,130
Georgia	35	1,752,006
Hawaii	9	895,069
Idaho	6	683,186
Illinois	112	7,488,466
Indiana	51	1,924,815
Iowa	18	894,319
Kansas	14	647,353
Kentucky	19	1,466,578
Louisiana	34	1,165,418
Maine	17	810,294
Maryland	67	5,218,875
Massachusetts	161	9,776,163
Michigan	47	1,697,925
Minnesota	31	1,456,983
Mississippi	14	879,857
Missouri	26	1,203,716
Montana	12	687,619
Nebraska	10	528,102
Nevada	2	410,881
New Hampshire	21	1,587,378
New Jersey	48	2,470,518
New Mexico	12	1,308,190
New York	334	21,717,666
North Carolina	53	2,056,091
North Dakota	4	492,870
Ohio	49	2,000,048
Oklahoma	12	955,454
Oregon	27	1,229,595
Pennsylvania	113	4,490,192
Rhode Island	28	1,946,955
South Carolina	17	882,078
South Dakota	2	428,856
Tennessee	36	1,494,031
Texas	74	2,792,644
Utah	15	851,598

SUMMARY OF GRANTS AND AWARDS BY STATE—Continued

[Fiscal year 1988 [1]]

State	Number of projects	Amount obligated
Vermont	16	932,018
Virginia	73	4,426,110
Washington	29	1,872,338
West Virginia	5	535,346
Wisconsin	37	1,706,875
Wyoming	7	630,197
Puerto Rico	2	547,187
Virgin Islands	2	223,326
Other [2]	8	45,750
Total Humanities	2,113	125,230,170

[1] Includes definite, Treasury, and Challenge funds obligated for new grants, supplemental awards on previous years' grants, and program contracts. Figures include $40,000 in recoveries from prior-year obligations.

[2] Awards to American citizens residing overseas at time of award.

Note.—Detail does not add to total due to rounding.

SUMMARY OF GRANTS AND AWARDS BY STATE

[Fiscal year 1987 [1]]

State	Number of projects	Amount obligated
Alabama	34	$1,498,796
Alaska	9	608,900
Arizona	22	1,043,708
Arkansas	18	1,164,850
California	205	10,318,927
Colorado	90	988,449
Connecticut	76	2,587,835
Delaware	11	480,276
District of Columbia	66	4,069,457
Florida	50	1,451,512
Georgia	56	2,127,226
Hawaii	14	766,456
Idaho	15	632,360
Illinois	177	5,305,417
Indiana	74	2,915,917
Iowa	32	1,145,387
Kansas	32	1,102,356
Kentucky	24	1,034,291
Louisiana	31	1,162,853
Maine	30	1,177,537
Maryland	62	2,793,578
Massachusetts	209	9,994,158
Michigan	72	1,956,098
Minnesota	41	1,661,612
Mississippi	26	699,844
Missouri	39	1,171,508
Montana	13	393,560
Nebraska	25	1,022,047
Nevada	12	535,268
New Hampshire	28	1,058,523
New Jersey	68	3,220,904
New Mexico	22	1,146,976
New York	336	21,578,075
North Carolina	68	2,976,036
North Dakota	11	748,127
Ohio	84	3,549,697
Oklahoma	21	1,008,267

SUMMARY OF GRANTS AND AWARDS BY STATE—Continued

[Fiscal year 1987 [1]]

State	Number of projects	Amount obligated
Oregon	36	858,567
Pennsylvania	155	6,365,227
Rhode Island	33	2,055,356
South Carolina	41	1,651,274
South Dakota	8	578,118
Tennessee	32	1,440,471
Texas	81	3,434,066
Utah	26	667,970
Vermont	24	1,057,269
Virginia	65	3,354,402
Washington	39	1,319,911
West Virginia	19	391,000
Wisconsin	78	2,711,608
Wyoming	12	521,683
Puerto Rico	4	383,848
Virgin Islands	4	222,450
Other [2]	13	297,026
Total Humanities	2,873	124,407,032
National Capital Arts and Cultural Affairs (District of Columbia)	15	4,000,000

[1] Includes definite, Treasury, and Challenge funds obligated for new grants, supplemental awards on previous years' grants, and program contracts. Obligations include $86,000 of recoveries from prior-year obligations and $31,000 in transfers from other agencies.

[2] Awards to American citizens residing overseas at time of award.

Note.—Detail does not add to total due to rounding.

SUMMARY OF GRANTS AND AWARDS BY STATE

[Fiscal year 1986 [1]]

State	Number of projects	Amount obligated
Alabama	23	$923,428
Alaska	8	840,249
Arizona	25	1,463,728
Arkansas	5	530,192
California	189	10,249,599
Colorado	15	1,536,077
Connecticut	60	2,529,348
District of Columbia	83	5,357,594
Delaware	14	729,076
Florida	26	1,216,337
Georgia	36	1,364,187
Hawaii	8	463,200
Idaho	5	545,383
Illinois	133	6,710,426
Indiana	76	2,401,481
Iowa	24	915,842
Kansas	13	560,938
Kentucky	12	825,652
Louisiana	29	1,130,308
Maine	14	648,720
Maryland	64	3,422,875
Massachusetts	181	7,806,537
Michigan	38	1,871,116
Minnesota	53	3,343,504
Mississippi	12	1,009,872
Missouri	30	823,080
Montana	8	406,982
Nebraska	11	807,301

SUMMARY OF GRANTS AND AWARDS BY STATE—Continued

[Fiscal year 1986 [1]]

State	Number of projects	Amount obligated
Nevada	8	566,024
New Hampshire	16	1,468,201
New Jersey	70	3,334,447
New Mexico	13	791,330
New York	335	21,052,850
North Carolina	64	2,113,184
North Dakota	4	584,231
Ohio	67	2,067,681
Oklahoma	16	1,162,824
Oregon	20	1,699,627
Pennsylvania	134	7,702,197
Rhode Island	29	1,376,549
South Carolina	24	1,044,847
South Dakota	4	470,059
Tennessee	24	1,215,469
Texas	61	2,325,613
Utah	12	607,680
Vermont	13	630,969
Virginia	77	3,353,545
Washington	27	1,306,526
West Virginia	8	799,845
Wisconsin	40	1,664,963
Wyoming	3	439,038
Puerto Rico	2	388,110
Virgin Islands	1	408,684
Other [2]	15	214,284
Total Humanities	2,282	119,221,809
National Capital Arts and Cultural Affairs (District of Columbia)	15	1,903,000

[1] Includes definite, Treasury, Challenge funds obligated for new grants, supplemental awards on previous years' grants, and program contracts. Obligations include $24,000 of recoveries from prior-year obligations and $27,000 in transfers from other agencies; $117,000 in adjustments to prior-year accounts are not included.

[2] Awards to American citizens residing overseas at time of award.

Note.—Detail does not add to total due to rounding.

SUMMARY OF GRANTS AND AWARDS BY STATE

[Fiscal year 1985 [1]]

State	Number of projects	Amount obligated
Alabama	20	$1,215,690
Alaska	6	755,332
Arizona	19	1,081,903
Arkansas	5	538,744
California	195	9,633,203
Colorado	19	898,791
Connecticut	59	2,313,268
Delaware	15	933,843
District of Columbia	72	5,515,633
Florida	33	2,284,757
Georgia	36	1,649,943
Hawaii	13	566,413
Idaho	5	509,768
Illinois	120	5,541,271
Indiana	60	2,933,629
Iowa	26	924,996
Kansas	22	1,948,054
Kentucky	18	896,009

SUMMARY OF GRANTS AND AWARDS BY STATE—Continued

[Fiscal year 1985 [1]]

State	Number of projects	Amount obligated
Louisiana	25	1,379,287
Maine	16	888,851
Maryland	59	3,640,787
Massachusetts	179	9,299,454
Michigan	45	2,963,023
Minnesota	39	2,135,741
Mississippi	23	851,174
Missouri	29	1,690,285
Montana	6	620,665
Nebraska	16	930,261
Nevada	5	356,150
New Hampshire	18	1,039,231
New Jersey	64	3,138,718
New Mexico	23	1,528,049
New York	311	22,415,930
North Carolina	66	3,407,962
North Dakota	2	578,500
Ohio	58	2,678,127
Oklahoma	13	1,050,454
Oregon	19	827,308
Pennsylvania	138	6,211,558
Rhode Island	22	1,363,240
South Carolina	33	1,369,498
South Dakota	6	763,190
Tennessee	22	1,085,987
Texas	82	3,772,279
Utah	6	534,660
Vermont	14	1,120,657
Virginia	58	2,597,722
Washington	37	1,655,056
West Virginia	7	677,103
Wisconsin	37	1,773,841
Wyoming	4	483,604
Puerto Rico	4	466,100
Virgin Islands	1	1,350
Other [2]	11	234,490
Grand total	2,241	125,671,544

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[1] Funds include definite, treasury, challenge, and carryover funds obligated in fiscal year 1985 for new and supplemental awards; excludes gifts.
[2] Awards to American citizens residing overseas at time of award.

Note.—Detail does not add to total due to rounding.

SUMMARY OF GRANTS AND AWARDS BY STATE

[Fiscal year 1984 [1]]

State	Number of projects	Amount obligated
Alabama	19	$758,156
Alaska	5	701,141
Arizona	13	755,230
Arkansas	8	605,645
California	217	10,665,159
Colorado	23	1,304,578
Connecticut	75	2,927,508
Delaware	13	788,429
District of Columbia	85	6,731,237
Florida	38	1,612,983
Georgia	46	1,737,443

SUMMARY OF GRANTS AND AWARDS BY STATE—Continued

[Fiscal year 1984 [1]]

State	Number of projects	Amount obligated
Hawaii	12	862,319
Idaho	7	641,649
Illinois	142	6,549,637
Indiana	56	2,679,350
Iowa	31	1,747,929
Kansas	18	875,476
Kentucky	28	1,200,331
Louisiana	26	866,072
Maine	19	1,061,661
Maryland	72	3,659,165
Massachusetts	175	8,203,577
Michigan	58	2,296,224
Minnesota	62	3,336,782
Mississippi	17	722,801
Missouri	33	1,060,911
Montana	8	473,610
Nebraska	23	936,980
Nevada	5	357,616
New Hampshire	20	929,947
New Jersey	85	3,611,966
New Mexico	20	1,228,161
New York	378	21,841,558
North Carolina	64	3,253,610
North Dakota	4	432,200
Ohio	62	2,098,087
Oklahoma	19	1,053,739
Oregon	27	1,231,025
Pennsylvania	137	7,536,070
Rhode Island	25	978,680
South Carolina	31	1,227,679
South Dakota	7	696,942
Tennessee	28	1,245,481
Texas	76	3,115,632
Utah	16	808,613
Vermont	18	998,859
Virginia	68	3,375,444
Washington	41	1,944,161
West Virginia	5	435,775
Wisconsin	42	1,892,727
Wyoming	4	514,139
Puerto Rico	3	503,332
Territories	1	201,000
Other [2]	8	296,995
Grand total	2,523	127,571,423

[1] Funds include Definite, Treasury, Challenge, and carryover funds obligated in fiscal year 1984 for new and supplemental awards; excludes gifts.

[2] Awards to American citizens residing overseas at time of award.

COMMENTS OF SENATOR COCHRAN

Chairman BYRD. Senator Cochran.

Senator COCHRAN. Mr. Chairman. Thank you.

Mr. Chairman, it is a genuine pleasure to hear Lynne Cheney's testimony before the committee. Her enthusiasm for the humanities is contagious, and it is a wonderful thing, I think, to have the benefit of her leadership as Chairman of the National Endowment for the Humanities. I think she points out very correctly that more attention has to be encouraged or directed into the importance of good teaching in our schools, in elementary and secondary, of course, but also at the college level, particularly. The description that she gives us about inspiring students through knowledge and excitement about subject matter and the importance of knowing things rather than just learning someone's techniques for presenting them, cannot be really overemphasized in our education system.

I was thinking back to a personal experience I had. I was a liberal arts student and went through law school in addition to that, but at one point in my career as a law student, I had the great honor and privilege of studying for 1 year at Trinity College of the University of Dublin under a Rotary Foundation fellowship. And ironically enough, although I was studying jurisprudence and things like conflict of laws and international law, I heard about a professor who was a visiting lecturer on the American novel at Trinity College from Smith College here in the United States. And one day just because of a fellow student's suggestion, I stopped in and listened to this lecture. And I never remember hearing someone who was more interesting as that lecturer, spending each class hour, each lecture hour talking about one novel, one author, without benefit of any notes that I noticed.

The result of that experience was that I ended up reading more American novels, I think, during the course of that year at Trinity College in Dublin than I had ever read as a student in the United States, because of the inspiration and excitement of hearing about authors and books that I had not been that familiar with before.

That experience leads me to the conclusion that Lynne Cheney is really on target. If we had more teachers and lecturers who really appreciated and understood and conveyed information in an exciting and an inspiring way, it would make more of us read more. It would make our students appreciate more the great works of art and the great contributions to our culture that have been made by writers of history, of novels, in the past.

At the University of Mississippi, we have a wonderful Faulkner Institute each year. I don't know whether or not the Humanities Endowment provides financial support for that, but if they ever apply for any assistance, it would be a wonderful grantee, because of the interest it has generated not only in the State of Mississippi and throughout the United States, but throughout the world; because it is an international event—reading Faulkner and understanding Southern culture and understanding whatever you end up understanding by reading some of Faulkner's works. [Laughter.]

It is a great experience for many people, and I hope that that could be considered, if they ever apply for assistance. We do have at the University of Mississippi an Institute for the Study of Southern Culture, and I know you are familiar with that. We exchanged some conversation about the encyclopedia that is being compiled, and I think that the National Endowment for the Humanities is assisting with a grant in that project.

Mrs. **Cheney**. In a very large way, as I remember.

Senator **Cochran**. Well, maybe we shouldn't go into how large. It's not like the New York Public Library.

Mrs. **Cheney**. No; the publication date for the "Encyclopedia of Southern Culture" is May 1, and I think it will be a significant cultural event, not just in the life of the South but in the life of the Nation.

We did fund a Faulkner seminar at the University of Southern Mississippi. It brought school teachers together to study Faulkner in the summer of 1988. I don't know if it is the same——

Senator COCHRAN. That's not the same thing, but that is a worthwhile project as well, I am sure. [Laughter.]

Mr. Chairman, I don't really have any other questions. Just a commendation, really, for our chairman, the wonderful work that she is doing as an inspiring leader in the field of humanities. Thank you.

Mrs. CHENEY. Thank you, Senator.

TRAVELING EXHIBITIONS

Chairman BYRD. The Endowment has indicated that encouragement of traveling exhibitions which serve audiences in many locations throughout the country will be a focus of the museums and historical organizations program.

Do the grant guidelines for this program establish this feature as a priority and do the review panels take the audiences served into consideration in their deliberations?

Mrs. CHENEY. Audiences served are something that our peer group panels are always very interested in, and if there is a way of disseminating an excellent program through traveling—an exhibit or some portion of it—I think that is definitely a mark in an applicant's favor. I think, for example, of a fine traveling project we supported recently that had its first venue at the New York Public Library—"William Wordsworth and the Age of Romanticism." Subsequently, it traveled to Chicago, where thousands and thousands of more people saw it. But there was, in addition to that, a poster component to the exhibit, a series of 10 to 12 posters about the age of the romantics that was made available to each of the State humanities councils. So in the end, people in every State, in Puerto Rico, the District of Columbia, and the Virgin Islands were able to see, able to gain some knowledge out of that exhibit that had been developed originally for an urban location.

Chairman BYRD. Another focus of the Endowment in this area has been to aggressively encourage private sector support. Are the program representatives able to do this without detracting from their involvement as experts in the subject matter of the field? Are they still able to provide full and thorough review of the applications for the panel process?

Mrs. CHENEY. Really, the suitability of a project for funding and the level and form of that funding are separate questions. When we at the Endowment evaluate a proposal, we first ask ourselves "Does this activity merit Endowment support?" "Will it contribute to the humanities in an important way?" Only if we can say this is truly an excellent proposal do we begin to consider the dollars and cents of making an award. Now of course, our resources are not boundless, so we have to consider how much of what is requested we can feasibly support. As part of that consideration, we are quite alert to the possibility of encouraging outside support. Whenever, in our judgment, an applicant has a realistic chance of generating private sector support—either because it has the institutional resources for fund-raising or because the proposed project will be especially attractive to potential contributors—we award some or all of our support in the form of a matching grant. In that case, the institution receives one dollar from NEH for each dollar it raises from other sources, up to the amount of our award.

COLUMBUS QUINCENTENARY INITIATIVE

Chairman BYRD. Public humanities projects. A common assumption throughout the Endowment's budget is increased public involvement and interest associated with the quincentenary in 1992 of Christopher Columbus' journey to the new world. Last year, the Endowment requested that funds be shifted away from these projects due to less than anticipated interest in the area.

On what basis does NEH now project increased interest?

Mrs. CHENEY. We have seen a number of fine applications for quincentenary projects. In fact, a number that is sufficiently dramatic that we thought our National Council, which is meeting this Thursday and Friday, should know about them; and so we have planned a special presentation on quincentenary projects. I visited one myself in Maine, which was really quite impressive. This was called "The Land of Norumbega." Norumbega is the designation that was put on 15th and 16th century maps covering the territory that is now Maine. This is a display of maps from that era, from the early period and from the later period as well, that aims at showing how maps, how cartography in an age when people lacked the information necessary to be as exact about drawing maps as they can be now, how maps were a product of imagination, how they represented the worldview of the people who drew them as much as specific geographical knowledge.

So this is just one example of the kinds of projects that we have seen apply to us over the past year or so that are very heartening in terms of the Endowment's being able to enrich the Columbus quincentenary celebration for the Nation.

Chairman BYRD. Were funds awarded in fiscal year 1988 related to the Columbus quincentenary?

Mrs. CHENEY. Yes; there were. I would have to provide for the record the exact amount.

Chairman BYRD. Would you please do that. Yes. And for what projects and in what States, how many applications were received. Were any from West Virginia.

Mrs. CHENEY. Yes, sir; I will provide all that.

[The information follows:]

COLUMBIAN QUINCENTENARY AWARD AND APPLICATIONS

As part of the international observance of the 500th anniversary of Christopher Columbus's voyage of discovery to the New World, NEH is inviting proposals for original scholarship on related topics and for the dissemination of both new and existing scholarships. Applications are being accepted throughout the Endowment's programs. Because there is no Columbian Quincentenary grant category specifically designated for applicants whose projects are related to that anniversary, we have no ready means of counting quincentenary-related applications. However, we have been identifying funded projects related to the Columbian Quincentenary.

In fiscal year 1988, there were 49 such projects receiving a total of $1,936,220. Following is a table showing the States where these grantees are located plus computer printouts describing the projects.

Columbian Quincentenary projects by State—fiscal year 1988

State	*Amount obligated* [1]
Alaska	$42,600
Arizona	1,500
California	324,227
Colorado	15,112
Connecticut	3,500
District of Columbia	40,000
Florida	80,583
Illinois	32,108
Indiana	120,686
Louisiana	2,200
Maine	116,949
Massachusetts	10,000
Michigan	37,429
New Jersey	27,500
New Mexico	350,000
New York	116,404
North Carolina	4,250
Ohio	3,500
Oklahoma	10,000
Oregon	3,500
Pennsylvania	7,000
Rhode Island	10,500
Texas	474,422
Virginia	75,750
Wisconsin	26,500
Total	1,936,220

[1] Includes definite and Treasury funds obligated for new grants and supplemental awards on previous years' grants.

COLUMBIAN QUINCENTENARY
FY 1988

EH-20744-87-88-0-1 Grantee:INST/ORGANIZ	**APPROVED DATE:	08/87
Professor James F. Deetz	**START DATE	10/01/87
Flowerdew Hundred Foundation	**END DATE	01/31/90
Hopewell, VA 23860	**APPROVED OR	301,095.00
CONG.DISTRICT: 04	**FUNDED OR	301,095.00
	**OBLIGATED	75,000.00
	**SUPPLEMENT AMOUNT:	
	** 02/88 OR	75,000.00

TITLE: A Summer Institute in the Historical Archaeology of European Expansion 1550-1700

PROJECT DESCRIPTIONS:

To support a five-week institute for college teachers on the historical archaeology of European expansion in the 200 years following the voyages of Columbus.

EH-20836-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/88
Dr. Frances E. Karttunen	**START DATE	09/01/88
University of Texas, Austin	**END DATE	12/31/89
Austin, TX 78712	**APPROVED OR	235,441.00
CONG.DISTRICT: 10	**FUNDED OR	235,441.00
	**OBLIGATED	235,441.00

TITLE: Re-Creating the New World Contact: A Summer Institute on Indigenous Languages and Literatures of Latin America

PROJECT DESCRIPTIONS:

To support a six-week institute at the Institute of Latin American Studies on Nahuatl and the literatures of Mesoamerica and the New World.

FA-27992-88 Grantee:INDIVIDUAL	**APPROVED DATE:	11/87
Professor Jose Cuello	**START DATE	09/01/88
(Marquette University)	**END DATE	05/31/89
Milwaukee, WI 53233	**APPROVED OR	26,500.00
CONG.DISTRICT: 05	**FUNDED OR	26,500.00
	**OBLIGATED	26,500.00

TITLE: Indian Cultural Adaptation in Northeastern Mexico, 1577-1725

FA-28004-88 Grantee:INDIVIDUAL	**APPROVED DATE:	11/87
Mr. John V. Fleming	**START DATE	09/01/88
(Princeton University)	**END DATE	08/31/89
Princeton, NJ 08540	**APPROVED OR	27,500.00
CONG.DISTRICT: 12	**FUNDED OR	27,500.00
	**OBLIGATED	27,500.00

TITLE: Christopher Columbus, the New World, and the Mendicant Spiritual Climate

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FB-26054-88 Grantee:INDIVIDUAL	**APPROVED DATE:	11/87
Professor William D. Phillips	**START DATE	08/01/88
(San Diego State University)	**END DATE	07/31/89
San Diego, CA 92182	**APPROVED OR	27,500.00
CONG.DISTRICT: 41	**FUNDED OR	27,500.00
	**OBLIGATED	27,500.00

TITLE: Expanding Horizons: The World before and after 1492

FB-26058-88 Grantee:INDIVIDUAL	**APPROVED DATE:	11/87
Dr. Craig H. Russell	**START DATE	09/01/88
(CA Polytechnic State Univ.-San Luis Obispo)	**END DATE	08/31/89
San Luis Obispo, CA 93407	**APPROVED OR	27,500.00
CONG.DISTRICT: 16	**FUNDED OR	27,500.00
	**OBLIGATED	27,500.00

TITLE: Codice Saldivar Number 4: A Study of a Baroque Guitar Masterpiece from the New World

FB-26061-88 Grantee:INDIVIDUAL	**APPROVED DATE:	11/87
Dr. Judith L. Elkin	**START DATE	01/01/88
(Unaffiliated)	**END DATE	12/31/88
Ann Arbor, MI 48105	**APPROVED OR	18,890.00
CONG.DISTRICT: 02	**FUNDED OR	18,890.00
	**OBLIGATED	18,890.00

TITLE: Absent from the Creation: Jews and the Cultural Transformation of the New World

FE-22026-88 Grantee:INDIVIDUAL	**APPROVED DATE:	05/88
Dr. Angel Delgado-Gomez	**START DATE	06/01/88
(University of Notre Dame)	**END DATE	11/30/88
Notre Dame, IN 46556	**APPROVED OR	750.00
CONG.DISTRICT: 03	**FUNDED OR	750.00
	**OBLIGATED	750.00

TITLE: The Letters of Hernan Cortes: A Critical Edition

FE-22333-88 Grantee:INDIVIDUAL	**APPROVED DATE:	05/88
Professor James L. Axtell	**START DATE	06/01/88
(College of William and Mary)	**END DATE	11/30/88
Williamsburg, VA 23185	**APPROVED OR	750.00
CONG.DISTRICT: 01	**FUNDED OR	750.00
	**OBLIGATED	750.00

TITLE: American Encounter: The Confluence of Cultures in Colonial North America

FE-22794-88 Grantee:INDIVIDUAL	**APPROVED DATE:	05/88
Dr. Lolita G. Brockington	**START DATE	06/01/88
(University of Texas, San Antonio)	**END DATE	11/30/88
Chapel Hill, NC 27514	**APPROVED OR	750.00
CONG.DISTRICT: 20	**FUNDED OR	750.00
	**OBLIGATED	750.00

TITLE: The Mizque Haciendas: Land, Labor, and Race in Early Colonial Charcas

FI-21844-88 Grantee:INDIVIDUAL	**APPROVED DATE:	02/88
Mr. Chriss N. Earnest	**START DATE	06/01/88
(University of Central Florida, Orlando)	**END DATE	08/31/88
Christmas, FL 32709	**APPROVED OR	2,200.00
CONG.DISTRICT: 11	**FUNDED OR	2,200.00
	**OBLIGATED	2,200.00

TITLE: Buccaneers and Baymen: Early British Colonialists of Corozal, Belize

FI-22166-88 Grantee:INDIVIDUAL	**APPROVED DATE:	02/88
Mr. W. David Ayers	**START DATE	06/01/88
(Patrick Henry High School)	**END DATE	08/31/88
San Diego, CA 92119	**APPROVED OR	1,800.00
CONG.DISTRICT: 41	**FUNDED OR	1,800.00
	**OBLIGATED	1,800.00

TITLE: California American Indians: The Image Explored

FI-22171-88 Grantee:INDIVIDUAL	**APPROVED DATE:	02/88
Ms. Laura A. Burge	**START DATE	06/01/88
(Trinity University)	**END DATE	08/31/88
San Antonio, TX 78213	**APPROVED OR	2,200.00
CONG.DISTRICT: 20	**FUNDED OR	2,200.00
	**OBLIGATED	2,200.00

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TITLE:    Colonial Costa Rica:  Setting the Stage for a Democratic
          Tradition
-----------------------------------------------------------------------------
FT-22273-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Miss Belinda G. Shepard                        **START DATE            06/01/88
(Louisiana State University)                   **END DATE              08/31/88
Baker, LA 70714                                **APPROVED  OR          2,200.00
CONG.DISTRICT: 06                              **FUNDED    OR          2,200.00
                                               **OBLIGATED             2,200.00
TITLE:    Disease and Native Louisianian Population Change
-----------------------------------------------------------------------------
FT-22367-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Mr. Lawrence J. Goodman                        **START DATE            06/01/88
(Scarsdale High School)                        **END DATE              08/31/88
Scarsdale, NY 10583                            **APPROVED  OR          1,800.00
CONG.DISTRICT: 20                              **FUNDED    OR          1,800.00
                                               **OBLIGATED             1,800.00
TITLE:    Law and De Soto's Expedition
-----------------------------------------------------------------------------
FT-30669-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Dr. Robert A. Voeks                            **START DATE            05/01/88
(California State University-Fullerton Fdn.)   **END DATE              09/30/88
Fullerton, CA 92634                            **APPROVED  OR          3,500.00
CONG.DISTRICT: 39                              **FUNDED    OR          3,500.00
                                               **OBLIGATED             3,500.00
TITLE:    African Slaves and Ecological Change in Brazil
-----------------------------------------------------------------------------
FT-30733-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Professor Roger A. Zapata                      **START DATE            05/01/88
(Trinity College, Hartford)                    **END DATE              09/30/88
Hartford, CT 06106                             **APPROVED  OR          3,500.00
CONG.DISTRICT: 01                              **FUNDED    OR          3,500.00
                                               **OBLIGATED             3,500.00
TITLE:    The Conquest of America through the Eyes of American Indian
          Chroniclers
-----------------------------------------------------------------------------

FT-31149-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Professor Stephen P. Bensch                    **START DATE            05/01/88
(Swarthmore College)                           **END DATE              09/30/88
Swarthmore, PA 19081                           **APPROVED  OR          3,500.00
CONG.DISTRICT: 07                              **FUNDED    OR          3,500.00
                                               **OBLIGATED             3,500.00
TITLE:    The Expansion of Iberian Trade in the Mediterranean
-----------------------------------------------------------------------------
FT-31323-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Professor Grant D. Jones                       **START DATE            05/01/88
(Davidson College)                             **END DATE              09/30/88
Davidson, NC 28036                             **APPROVED  OR          3,500.00
CONG.DISTRICT: 09                              **FUNDED    OR          3,500.00
                                               **OBLIGATED             3,500.00
TITLE:    An Ethnohistory of the Itza Maya Conquest
-----------------------------------------------------------------------------
FT-31329-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Dr. Kenneth F. Kiple                           **START DATE            05/01/88
(Bowling Green State University)               **END DATE              09/30/88
Bowling Green, OH 43403                        **APPROVED  OR          3,500.00
CONG.DISTRICT: 05                              **FUNDED    OR          3,500.00
                                               **OBLIGATED             3,500.00
TITLE:    The Biological Consequences of the Transatlantic Slave
          Trade
-----------------------------------------------------------------------------
FT-31485-88          Grantee:INDIVIDUAL        **APPROVED DATE:           02/88
Ms. Kathryn D. Kruger-Hickman                  **START DATE            05/01/88
(University of Oregon, Eugene)                 **END DATE              09/30/88
Eugene, OR 97405                               **APPROVED  OR          3,500.00
CONG.DISTRICT: 04                              **FUNDED    OR          3,500.00
                                               **OBLIGATED             3,500.00
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TITLE: Cortes's Letters to Charles V: Literary Aspects in the Creation of Cortes's Public Image

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FT-31824-88 Grantee:INDIVIDUAL
Dr. John K. Thornton
(Millersville State College)
Millersville, PA 17551
CONG.DISTRICT: 16

**APPROVED DATE:	02/88
**START DATE	05/01/88
**END DATE	09/30/88
**APPROVED OR	3,500.00
**FUNDED OR	3,500.00
**OBLIGATED	3,500.00

TITLE: European Military Encounters with the Non-Western World, 1400-1600

GL-20856-88-00-1-0 Grantee:INST/ORGANIZ
Mr. Iza C. Sessler
Brazilian Cultural Foundation, Inc.
New York, NY 10017
CONG.DISTRICT: 15

**APPROVED DATE:	08/88
**START DATE	10/01/88
**END DATE	09/30/91
**APPROVED OR+MATCH	175,000.00
**FUNDED OR+MATCH	175,000.00
**OBLIGATED	75,000.00

TITLE: Portugal-Brazil: The Age of Atlantic Discoveries

PROJECT DESCRIPTIONS:
To support an exhibition, an interpretive catalogue, lectures, and a traveling exhibition about Portuguese contributions to the Age of Exploration, including the discovery of Brazil in 1500.

GL-20866-88 Grantee:INST/ORGANIZ
Dr. Norman Fiering
John Carter Brown Library
Providence, RI 02912
CONG.DISTRICT: 01

**APPROVED DATE:	08/88
**START DATE	09/01/88
**END DATE	03/31/89
**APPROVED OR	10,500.00
**FUNDED OR	10,500.00
**OBLIGATED	10,500.00

TITLE: America and the European Consciousness: The Impact of the New World on the Old, 1492-1750

PROJECT DESCRIPTIONS:
To support planning of an international conference, an exhibition with interpretive catalogue, and public lectures on how New World discoveries influenced European ideas about civilization.

GL-20869-88 Grantee:INST/ORGANIZ
Ms. Julia R. Walkling
Maine Library Association
Augusta, ME 04210
CONG.DISTRICT: 02

**APPROVED DATE:	08/88
**START DATE	10/01/88
**END DATE	09/30/90
**APPROVED OR	116,949.00
**FUNDED OR	116,949.00
**OBLIGATED	116,949.00

TITLE: The Land of Norumbega: Outreach Programs in Maine Libraries

PROJECT DESCRIPTIONS:
To support a series of 120 reading and discussion groups, a slide-tape and a videotape program, a conference, and ancillary literature about European exploration of the New England coast in the 15th and 16th centuries.

GM-23574-88 Grantee:INST/ORGANIZ
Dr. Cary I. Sneider
University of California, Berkeley
Berkeley, CA 94720
CONG.DISTRICT: 08

**APPROVED DATE:	11/87
**START DATE	05/01/88
**END DATE	04/30/89
**APPROVED OR	50,000.00
**FUNDED OR	49,927.00
**OBLIGATED	49,927.00

TITLE: Columbus's Great Experiment

PROJECT DESCRIPTIONS:
To support planning for an exhibition, catalogue, and planetarium presentation that examine the role of scientific and technological knowledge in exploration by focusing on the voyages of Columbus.

GM-23578-88-00-1-0 Grantee:INST/ORGANIZ
Mr. Robert H. McNulty
Partners for Livable Places
Washington, DC 20037
CONG.DISTRICT: 88 AT LARGE

**APPROVED DATE:	11/87
**START DATE	03/01/88
**END DATE	06/30/89
**APPROVED OR+MATCH	65,000.00
**FUNDED OR+MATCH	60,000.00
**OBLIGATED	40,000.00

TITLE: The Lost Century: Basque Whaling Enterprises in
16th-Century North America

PROJECT DESCRIPTIONS:

To support planning for a traveling exhibition examining recent discoveries about the Spanish-Basque presence in North America in the 16th century.

GM-23627-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	05/88
Dr. Richard F. Townsend	**START DATE	07/01/88
Art Institute of Chicago	**END DATE	02/28/89
Chicago, IL 60603	**APPROVED OR	32,108.00
CONG.DISTRICT: 07	**FUNDED OR	32,108.00
	**OBLIGATED	32,108.00

TITLE: Nuevo Mundo: Images of Man and Nature in Pre-Columbian Art

PROJECT DESCRIPTIONS:

To support planning for an exhibition, catalogue, and programs that explore the intellectual and aesthetic foundations of ancient New World civilizations.

GM-23639-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	05/88
Dr. Helen Lucero	**START DATE	07/01/88
International Folk Art Foundation	**END DATE	06/30/89
Santa Fe, NM 87504	**APPROVED OR	300,000.00
CONG.DISTRICT: 03	**FUNDED OR	300,000.00
	**OBLIGATED	300,000.00

TITLE: Family and Faith: The Hispanic Heritage of New Mexico

PROJECT DESCRIPTIONS:

To support an exhibition that explores the culture of Hispanic New Mexico in historical perspective.

GM-23683-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	05/88
Dr. Joe S. Graham	**START DATE	07/01/88
Texas A&I University	**END DATE	06/30/89
Kingsville, TX 78363	**APPROVED OR	42,943.00
CONG.DISTRICT: 27	**FUNDED OR	42,943.00
	**OBLIGATED	42,943.00

TITLE: Nuevo Santander: The Confluence of Cultures in South Texas

PROJECT DESCRIPTIONS:

To support planning for a traveling exhibition, catalogue, and related educational programs exploring aspects of the Hispanic presence in South Texas from 1750 to 1940.

GP-21490-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	08/88
Dr. Earl H. Flam	**START DATE	10/01/88
Sul Ross State University	**END DATE	05/31/89
Alpine, TX 79832	**APPROVED OR	21,024.00
CONG.DISTRICT: 21	**FUNDED OR	21,024.00
	**OBLIGATED	21,024.00

TITLE: Planning for Symposia for Columbian Quincentenary

PROJECT DESCRIPTIONS:

To support the establishment of a planning committee, the development of a planning conference, and the mounting of postplanning conference activities for three symposia on the Columbian Quincentenary in the Big Bend region.

GP-21494-88-00-1-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	08/88
Dr. Frederick W. Lange	**START DATE	10/01/88
University of Colorado, Boulder	**END DATE	09/30/89
Boulder, CO 80309	**APPROVED OR	15,112.00
CONG.DISTRICT: 02	**FUNDED OR	15,112.00
	**OBLIGATED	15,112.00

TITLE: Before Columbus: Precolumbian Cultural Traditions from
Isthmian America

PROJECT DESCRIPTIONS:

To support the planning of a traveling photographic exhibit of Isthmian Precolumbian cultural artifacts.

GP-21496-88-00-1-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	08/88
Dr. Judith L. Elkin	**START DATE	01/01/89
University of Michigan, Ann Arbor	**END DATE	06/30/89
Ann Arbor, MI 48109	**APPROVED OR	18,539.00
CONG.DISTRICT: 02	**FUNDED OR	18,539.00
	**OBLIGATED	18,539.00

TITLE: Planning Public Events on the Theme: Jews in the Discovery of the New World
PROJECT DESCRIPTIONS:
To support the planning of a series of public programs that explore the Jewish role in the discovery, conquest, and settlement of the New World.

RC-21593-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	05/88
Mr. David C. Weber	**START DATE	10/01/88
Stanford University	**END DATE	09/30/90
Stanford, CA 94305	**APPROVED OR+MATCH	275,000.00
CONG.DISTRICT: 12	**FUNDED OR	200,000.00
	**OBLIGATED	200,000.00

TITLE: Improving Access to Library Resources in the Field of Latin American Studies
PROJECT DESCRIPTIONS:
To support the conversion to machine-readable format of six major research libraries' bibliographic records for Latin American studies materials.

RL-20695-85-00-1-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/85
Professor Dennis Tedlock	**START DATE	05/01/85
SUNY Res. Fdn./Buffalo Main Campus	**END DATE	08/31/88
Boston, MA 02215	**APPROVED OR+MATCH	45,000.00
CONG.DISTRICT: 08	**FUNDED OR+MATCH	45,000.00
	**OBLIGATED	10,000.00

TITLE: "Rabinal Achi": A Mayan Drama of Human Sacrifice
PROJECT DESCRIPTIONS:
To support the translation of a 15th-century Mayan drama of human sacrifice called the MAN OF RABINAL or DANCE OF THE TRUMPET.

RL-21019-87-00-2-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/87
Dr. Charles T. Gehring	**START DATE	07/01/87
University of the State of New York	**END DATE	06/30/90
Albany, NY 12234	**APPROVED OR+MATCH	131,935.00
CONG.DISTRICT: 23	**FUNDED OR+MATCH	84,813.00
	**OBLIGATED	24,813.00

TITLE: New Netherland Archives
PROJECT DESCRIPTIONS:
To support work on the selection, editing, and translation of documents of the Dutch administration in colonial America. One volume will cover the council minutes up to 1656; the other, the court materials of the local administration.

RL-21113-87-00-2-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/87
Dr. John L. Kessell	**START DATE	07/01/87
University of New Mexico	**END DATE	06/30/90
Albuquerque, NM 87131	**APPROVED OR+MATCH	200,000.00
CONG.DISTRICT: 01	**FUNDED OR+MATCH	100,050.00
	**OBLIGATED	50,000.00

TITLE: The Journals of Diego de Vargas
PROJECT DESCRIPTIONS:
To support work on the edition and translation of the journals of Diego de Vargas, a Spanish governor of the American southwest at the turn of the 17th century.

RL-21124-87-00-2-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/87
Dr. Fredi Chiappelli	**START DATE	05/01/87
University of California, Los Angeles	**END DATE	06/30/88
Los Angeles, CA 90024	**APPROVED OR+MATCH	33,265.00
CONG.DISTRICT: 23	**FUNDED OR+MATCH	31,680.26
	**OBLIGATED	10,000.00

TITLE: Italian Sources for the New World Encounter (1492-1521)
PROJECT DESCRIPTIONS:
To support the translation of firsthand Italian accounts of the Columbian voyages, and a variety of public and private texts that reflect the response of Renaissance Italy to its earliest contact with the New World.

RL-21193-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/88
Professor Helen Nader	**START DATE	05/01/88
Indiana University, Bloomington	**END DATE	04/30/89
Bloomington, IN 47405	**APPROVED OR	39,944.00
CONG.DISTRICT: 09	**FUNDED OR	39,944.00
	**OBLIGATED	39,944.00

TITLE: Repertorium Columbianum, Vol. IV Columbus' BOOK OF PRIVILEGES
PROJECT DESCRIPTIONS:
To support the retranslation of the BOOK OF PRIVILEGES, a collection of royal documents by King Ferdinand and Queen Isabella granting offices, privileges, and authority to Columbus for the discovery and settlement of the New World.

RO-21235-86-87-4-1 Grantee:INST/ORGANIZ	**APPROVED DATE:	11/85
Dr. Donald A. Frey	**START DATE	01/01/86
Texas A&M Research Foundation	**END DATE	08/31/88
College Station, TX 77843	**APPROVED OR+MATCH	97,220.00
CONG.DISTRICT: 06	**FUNDED OR+MATCH	97,220.00
	**OBLIGATED	22,220.00
	**SUPPLEMENT AMOUNT:	
	** 08/87 MATCH	22,220.00

TITLE: The Nautical Archaeology of Ships of Discovery
PROJECT DESCRIPTIONS:
To support the cleaning, conserving, analyzing, and replicating of the artifacts collected from the Molasses Reef wreck, which is near an island north of Haiti. The site is producing information about the age of discovery.

RO-21395-87-00-1-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/87
Dr. Bonnie G. McEwan	**START DATE	10/01/87
Florida Bureau of Archaeological Research	**END DATE	10/31/89
Tallahassee, FL 32399	**APPROVED OR	22,383.00
CONG.DISTRICT: 02	**FUNDED OR	22,383.00
	**OBLIGATED	12,383.00

TITLE: Town Plan and Town Life at 17th Century San Luis
PROJECT DESCRIPTIONS:
To support the archaeological investigation of changes resulting from interaction between the Apalachee Indians and Spanish missionaries in the 17th century in the founding of the Florida town of San Luis de Talimali.

RO-21465-87-00-4-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	02/87
Dr. Dean R. Snow	**START DATE	06/01/87
SUNY Res. Fdn./Albany	**END DATE	05/31/89
Albany, NY 12201	**APPROVED OR+MATCH	39,791.00
CONG.DISTRICT: 23	**FUNDED OR+MATCH	39,791.00
	**OBLIGATED	14,791.00

TITLE: Mohawk Valley Project
PROJECT DESCRIPTIONS:
To support the Mohawk Valley Project which applies the evidence of documents and archaeology to determine the Mohawk tribe's culture as it evolved in the 17th century from pre- to well documented post-epidemic conditions.

RO-21676-88 Grantee:INST/ORGANIZ	**APPROVED DATE:	05/88
Dr. Richard Bauman	**START DATE	07/01/88
Indiana University, Bloomington	**END DATE	08/31/89
Bloomington, IN 47405	**APPROVED OR	80,000.00
CONG.DISTRICT: 09	**FUNDED OR	79,992.00
	**OBLIGATED	79,992.00

TITLE: Hispanic Folk Poetry in Performance
PROJECT DESCRIPTIONS:
To support a comparative study of traditional folk poetry forms brought to the New World by Spanish colonists and of their continuing role in the social life of Latin American culture.

RO-21690-88-00-2-0 Grantee:INST/ORGANIZ	**APPROVED DATE:	05/88
Dr. Jean S. Aigner	**START DATE	05/01/88
University of Alaska, Fairbanks	**END DATE	08/31/90
Fairbanks, AK 99775	**APPROVED OR+MATCH	65,200.00
CONG.DISTRICT: 01	**FUNDED OR+MATCH	65,200.00
	**OBLIGATED	42,600.00

TITLE: The Archaeology of Protohistoric Settlement Patterns and Culture Change, Unalaska Island, Alaska
PROJECT DESCRIPTIONS:
To support an interdisciplinary study of changes in settlement pattern, population size, and social structure on Unalaska Island of the eastern Aleutians prior to contact by Russian explorers and in the early contact period.

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RP-21137-88         Grantee:INST/ORGANIZ     **APPROVED DATE:              08/88
Mr. John N. Drayton                          **START DATE               02/01/89
University of Oklahoma, Norman               **END DATE                 09/30/90
Norman, OK 73019                             **APPROVED  OR+MATCH      16,220.00
CONG.DISTRICT: 04                            **FUNDED    OR            10,000.00
                                             **OBLIGATED               10,000.00
TITLE:    The Primeros Memoriales of Fray Bernardino de Sahagun,
          edited by Eloise Keber, H.B. Nicholson, and Thelma Sullivan
PROJECT DESCRIPTIONS:
To support the publication of a translation of Fray Bernardino de Sahagun's
PRIMEROS MEMORIALES, a source for knowledge of Aztec culture. The volume will
also include interpretive essays.
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RT-20646-86-00-2-0  Grantee:INST/ORGANIZ     **APPROVED DATE:              05/86
Dr. Charles W. Polzer                        **START DATE               10/01/86
University of Arizona                        **END DATE                 03/31/90
Tucson, AZ 85721                             **APPROVED  OR+MATCH     168,155.00
CONG.DISTRICT: 02                            **FUNDED    OR+MATCH     168,155.00
                                             **OBLIGATED                1,500.00
TITLE:    Documentary Relations of the Southwest:  Provincias Internas
PROJECT DESCRIPTIONS:
To support preparation of a computerized index and related subject indices
to the documents of the Provincias Internas branch of the General Archive of
Mexico, a documentary collection on northern New Spain (northern Mexico
and the southwestern United States) during the 18th and 19th centuries.
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RT-21012-88         Grantee:INST/ORGANIZ     **APPROVED DATE:              05/88
Dr. Richard N. Adams                         **START DATE               08/01/88
University of Texas, Austin                  **END DATE                 01/31/91
Austin, TX 78712                             **APPROVED  OR+MATCH     178,694.00
CONG.DISTRICT: 10                            **FUNDED    OR           150,594.00
                                             **OBLIGATED              150,594.00
TITLE:    A Historical Atlas of Central America
PROJECT DESCRIPTIONS:
To support the preparation of a historical atlas of Central America.
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RX-20909-87-00-2-0  Grantee:INST/ORGANIZ     **APPROVED DATE:              08/87
Dr. Robert I. Burns                          **START DATE               10/01/87
University of California, Los Angeles       **END DATE                 09/30/88
Los Angeles, CA 90024                        **APPROVED  OR+MATCH      24,000.00
CONG.DISTRICT: 23                            **FUNDED    OR+MATCH      22,657.11
                                             **OBLIGATED                4,000.00
TITLE:    Cultural Encounters:  The Impact of the Inquisition in
          Spain and the New World
PROJECT DESCRIPTIONS:
To support an international conference on the Inquisition in Spain and the New
World, concentrating on its role in the development of the latter.
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SO-20854-88         Grantee:INST/ORGANIZ     **APPROVED DATE:              05/88
Mr. Michael T. Bass                          **START DATE               07/01/88
Florida Endowment for the Humanities         **END DATE                 06/30/90
Tampa, FL 33607                              **APPROVED  OR            66,000.00
CONG.DISTRICT: 00   UNKNOWN                  **FUNDED    OR            66,000.00
                                             **OBLIGATED               66,000.00
TITLE:    Spanish Pathways in Florida
PROJECT DESCRIPTIONS:
To support a series of scholarly essays and a traveling, interpretive exhibi-
tion on the Spanish and Caribbean heritage of Florida.
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CLOSING REMARKS BY CHAIRMAN BYRD

Chairman BYRD. Mrs. Cheney, I will submit additional questions for the record and others may wish to do likewise. If you could respond to those promptly.

I want to join Senator Cochran in commending you for your enthusiasm and for the inspiration that you undoubtedly bring to bear in this area.

Mrs. CHENEY. Thank you, sir. It is nice to work with a committee who is as committed to the humanities as those of us who work in the agency are.

Chairman BYRD. Well, I cannot understand why some of the things are happening that you tell us are going on in the country by way of the laxness with which we deal with this serious problem. You know, Machiavelli in his "Admonitions to the Prince," urged him to study history, and I think it is so important to our understanding of so many things. I think, for example, that to have a clearer understanding of our Constitution, the phrases and clauses in it, we ought to have a more than passing knowledge of English history, because the roots of our Constitution go back to English history, to the various charters and petitions and bills there. And we would find, if we carefully studied English history, a deeper appreciation of American history.

Many of us may be under the impression that our illustrious Founding Fathers in Philadelphia simply had these brilliant ideas that sprang from their craniums like sparks from an anvil, when we really need to know that they were very familiar with the English experience, the English experience, not only in English history, but as well through the colonial legislatures and so on. Someone was quite advanced in age, when someone asked him why he was studying geometry at this late state in life, and he said, "If not now, when?" [Laughter.]

Mrs. CHENEY. Nice story. I an tell you that two-thirds of the 17-year-olds on the survey that the Endowment funded could not say in a multiple choice test what the Magna Carta was, which is very disheartening.

Chairman BYRD. Well, you keep up your good work, and perhaps they will understand it better——

Mrs. CHENEY. That's our goal.

Chairman BYRD [continuing]. As time goes on. I would encourage the emphasis on English history and American history, so that they not only know about the Magna Carta but also the Coronation Charter by Henry I, 1100, he reigned from 1100 to 1135; the Confirmation Charters, in the time of Edward I, who reigned from 1272 to 1307; the Confirmation Charters, 1297; the Apology of the Commons in 1604; Petition of Right, 1628 under Charles I, who lost his head because he took on parliament and there was a civil war between the king and the parliament; and the Declaration of Rights under William III, William of Orange, 1689, and the Bill of Rights in December of that same year.

Mrs. CHENEY. I think we can do a much better job than we have done, and I think that an important part of that is for people like yourself in such distinguished leadership positions to make clear that the knowledge of history enriches our lives and makes us better citizens.

Chairman BYRD. Well, just for the record, let me embellish it by saying that I had some good teachers. This was during the Great Depression. They couldn't get their checks cashed without surrendering 20 to 25 percent of the check to get the check cashed, but they were dedicated teachers. Miss Anna Brochik taught English grammar. Mrs. W.J.B. Cormany taught music, the violin, all the instruments in the high school orchestra. Her husband, who was the principal, a strict disciplinarian, taught physics, and we paid attention in his classes. And David Reemsnyder taught algebra and geometry and math. D. Pitt O'Brien, who taught history, later went on to be Secretary of State.

These teachers inspired students to want to excel.

So you are on the right track. Don't be discouraged. You've got some believers here.

Mrs. CHENEY. I appreciate that. I can't think of a place I would rather have them. [Laughter.]

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. We may have some additional questions, and if we do we will submit them to you in writing. Thank you very much.

[The following questions were not asked at the hearing, but were submitted to the Endowment for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Humanities and Higher Education

Question: The Endowment's budget (p.5) indicates that improving the quality of higher education in the humanities will be a major objective in FY 1990. What specific projects are envisioned to accomplish this objective? Will these be new initiatives or extensions of existing programs?

Answer: The Higher Education in the Humanities program supports a variety of activities, including institutes for college and university faculty, national conferences, curriculum development, and faculty study programs within individual institutions. Most projects are designed to foster the reinvigoration of teaching that occurs when faculty members study and discuss texts and topics central to the undergraduate curriculum. Because the higher education program seeks principally to serve undergraduate education, projects that aim to improve the teaching of core humanities materials or that propose to attract more students to the study of such materials are particularly encouraged.

In FY 1990, we plan a number of emphases that will extend or elaborate upon these efforts. First, we will invite applications for higher education institutes that place the intensive study of texts in a broad historical or thematic context. Second, we will issue new, more explicit guidelines that encourage institutions contemplating curricular revision to clarify their curricular goals, identify the texts that are integral to those goals, and design coherent programs of study that provide a common intellectual background for all students at an institution. Third, we will emphasize strengthening the humanities at the nation's two-year community, junior, and technical colleges--because a major portion of all students enrolled in humanities courses attend these institutions. Fourth, we will offer faculty at schools of education opportunities to become more knowedgeable about the humanities. Fifth, we will continue to solicit proposals for activities that encourage better foreign language teaching. Finally, we want to aid in the development of internship programs and collaborative projects for faculty that broaden disciplinary interests.

In addition, we will continue to promote improvements in teaching at institutions of higher education through our Summer Seminars for College Teachers program. One of the Endowment's longest-running and best known efforts, this program invites faculty to study important works in the humanities, to conduct research at major institutions, and to test their ideas and insights before a knowledgeable body of colleagues.

Access to Excellence

Question: Has tnere been a percentage change in the geographic distribution of applications?

Answer: Broadly speaking, the geographic distribution of our applications seems to have been quite stable over time. This probably reflects an underlying continuity in the distribution of the nation's colleges and universities, museums, libraries, and other cultural resources among states, regions, and rural and urban areas. For example, 29 percent of our applications in FY 1986 came from the 24 states west of the Mississippi, and in FY 1988 31 percent came from those states.

The purpose of the "Access to Excellence" program is to provide information and encouragement to potential applicants in rural, innercity, tribal, and minority communities from which relatively few grant proposals have been forthcoming in the past. The focus of this effort is not so much on geographic areas as on specific groups. Even though the "Access to Excellence" program has not wrought any dramatic changes in the geographic distribution of our applications, there have been a number of specific instances that we can point to where contacts initiated by our "Access to Excellence" coordinator have resulted in applications being submitted to the Endowment that might not have come to us otherwise. For example, the coordinator's work with the University of Alabama led to a $134,000 NEH grant to support a summer institute for high school teachers from rural, western Alabama. The topic of the institute was "The U.S. Constitution and the South." And the Middle Oregon Historical Society received a $500,000 NEH Challenge Grant to support the construction of a museum that reflects the history and culture of the Confederated Tribes of Warm Springs.

Question: What about small vs. large organizations in these areas?

Answer: We have no readily available means of measuring the relative proportions of applications submitted by organizations of various sizes. Nevertheless, we can say that several of our programs have been particularly effective in assisting smaller organizations and that these programs continue to generate applications from such organizations in impressive numbers. For example, the state humanities councils, which as applicants to the Endowment received nearly $25 million in NEH grants, were themselves the recipients of approximately 6,000 grant applications. Most of the state councils' applicants are relatively small-scale organizations serving a local or state-wide public. In FY 1988, the Challenge Grants program received 185 applications and made new matching grant offers to support the institutional costs of 31 humanities organizations, most of which are neither large nor well endowed. Out of $16.5 million awarded during FY 1988 to 100 organizations for new or continuing Challenge Grants, $2.8 million went to 22 four-year colleges, $2.7 million to 21 museums, $1.5 million to 7 libraries (not counting NEH support of the New York Public Library), and $317,333 to 5 historical societies. And, in the Higher Education in the Humanities program recent efforts to attract more applications from two-year colleges have begun to bear fruit. In FY 1988, this program received 18 applications from two-year colleges and awarded grants to 5 of them; so far in FY 1989 the Higher Education in the Humanities program has already reviewed 15 applications from these small institutions, of which 5 have been recommended for approval.

It is worth noting that several NEH programs that award grants to individuals rather than to organizations--such as the Travel to Collections and the College Teacher Fellowships programs--are especially suited to the needs of faculty at small institutions. For example, in FY 1988 the Endowment awarded a $750 Travel to Collections grant to British historian William G. Palmer of Marshall University in Huntington, West Virginia. That grant enabled him to examine historical materials housed at Yale University essential to his research on Oliver St. John and the reorientation of Parliamentary politics in the summer of 1641. The Endowment's Summer Seminars for College Teachers and Summer Seminars for School Teachers programs, by helping faculty and teachers become more knowledgeable about the subjects they teach, contribute to strengthening humanities instruction at the often small institutions with which the seminar participants are affiliated. In FY 1988, six college teachers and two school teachers from West Virginia participated in NEH-sponsored seminars held in various parts of the country.

Question: What has been your experience with regard to West Virginia applications?

Answer: In FY 1988, the Endowment received 26 applications from West Virginia. We received 43 applications from West Virginia in FY 1987, of which 19 were submitted to the one-time-only Bicentennial Bookshelf competition; 24 applications in FY 1986; and 23 applications in FY 1985.

One West Virginia applicant, whose proposal had been submitted with the encouragement of our "Access to Excellence" coordinator, received $145,376 to conduct a four-week institute that will examine the Roman family in ancient history and literature. Awarded in FY 1988, the grant will support participation by thirty local teachers and ten from around the nation in an institute to be held at Marshall University during the summer of 1989.

Challenge Grants

Question: As with the Arts Endowment, outside matching funds are important in extending the impact of the Federal dollars provided for the Humanities. Yet, with the NEH Challenge Grant program, applications have declined in recent years (p. 8). What has been the magnitude of this decrease?

Answer: The number of applications to the Challenge Grants program has declined about one-third since FY 1987--209 proposals were submitted in FY 1987 compared to 138 applications for the FY 1989 grant competition.

Question: What steps is the Endowment taking to address this pattern?

Answer: We have planned a number of special emphases for Challenge in FY 1990 that should help to pump some new life into the program and to reverse the decline in the volume of applications:

-- Special efforts are underway to stimulate more applications from Historically Black Colleges and Universities (HBCU) for the FY 1990 cycle. For example, we have sent out letters to HBCUs encouraging them to apply against the May 1989 deadline for FY 1990 awards;

-- Museums, libraries, and other general audience institutions are being encouraged to create endowments to support internships for scholars, graduate students, and recent doctorate recipients in the humanities; and

-- Increased emphasis is being placed on efforts to improve humanities education:

  * Higher Education institutions are being encouraged to endow programs to recognize superior teaching among their faculty; and

  * National scholarly groups and organizations are being encouraged to endow programs for the intellectual growth and recognition of teachers in elementary and secondary schools.

Question: Are there geographical trends associated with these decreases?

Answer: No, we have detected no geographical trends in the decline in Challenge Grant applications.

Research Programs

Question: The Endowment provides regrants funding (p. 57) that supports individuals engaged in humanities research both in the U.S. and in selected areas abroad. Who is eligible for funding abroad?

Answer: In the Regrants for International Research category, the Endowment supports programs of national organizations and learned societies that enable American scholars to pursue humanities research abroad and to attend or participate in international conferences. Individual scholars apply directly to these organizations for research support, but the eligibility requirements set by the organizations basically follow the requirements the Endowment sets for its own applicants, that is, applicants must be U.S. citizens or foreign nationals who have been living in the United States or its territories for at least three years.

Question: What areas have received such funding?

Answer: Grants in the Regrants for International Research category currently support programs that offer opportunities for American scholars to engage in humanities research in many areas of the world. For example, the International Research Awards Program of the Social Science Research Council (SSRC) supports humanities research by American scholars on Africa, the Near and Middle East, Asia, Latin America, and Europe; the International Research and Exchanges Board (IREX) administers scholarly exchanges and collaborative research projects with the Soviet Union and the countries of Eastern Europe; two programs of the Committee on Scholarly Communication with the People's Republic of China (CSCPRC) support activities that are analogous to those of IREX; and the ACLS/SSRC Joint Committee on Chinese Studies supports collaborative and individual research on China outside the People's Republic. In addition, the International Travel Grant Program for

American Scholars administered by ACLS supports travel to all parts of the world by American scholars who need to conduct research in the humanities.

Question: Is this an appropriate responsibility for the Federal government to be supporting humanities studies abroad?

Answer: Yes. We think it is in the best interests of the nation for the federal government to support organizations that provide opportunities for American scholars to conduct research abroad. The scholarship these researchers produce expands and enriches our understanding of other cultures and other nations of the world. To accomplish this work, American scholars need to continue to travel to other countries to consult primary research materials.

Preservation

During the fiscal year 1989, the Congress provided funding for the Endowment to begin a significant multi-year effort to preserve many deteriorating printed documents. Much of this effort will be focused on projects to microfilm brittle books. Consistent with the plan laid out by NEH last year, the budget request includes $13.5 million for Preservation to continue this initiative.

Question: What actions has NEH taken to expand the training opportunities available to those interested in preservation?

Answer: The education of preservation personnel is a high priority for the Endowment. In FY 1988, for example, the Association of Research Libraries received a three-year NEH grant of $145,167 that will provide ten research libraries with the kind of sustained, professional consultation necessary to design long-term strategic plans for the preservation of their collections. A three-year matching award of $450,000 from the Endowment to Columbia University is supporting the only program in the United States that offers graduate instruction to both conservators and preservation administrators. At the conclusion of the grant period, twenty more librarians will have obtained the training necessary to deal with the complex issues involved in the preservation of large research collections.

The Endowment also supports the training of existing staff of humanities institutions through grants for preservation field services at regional and national organizations such as the Southeastern Library Network in Atlanta, the Conservation Center for Art and Historic Artifacts in Philadelphia, the Northeast Document Conservation Center in Andover, Massachusetts, the Society of American Archivists in Chicago, and the American Association of State and Local History in Nashville. The individual surveys and workshops offered by these organizations on various aspects of preservation practice will also reach many of the people who must make the policy decisions affecting the treatment and storage of materials entrusted to their care.

Question: Would an expansion of this network improve the preservation of these culturally valuable documents?

Answer: Yes. As noted in the answer to the previous question, we are currently supporting a number of grants that are providing valuable preservation expertise and knowledge to institutions at the regional and local levels. As more people and institutions learn how to deal with preservation problems, more culturally important documents will be saved and preserved.

Question: Would greater geographic dispersion change the pace at which preservation and microfilming occurs?

Answer: The Endowment's preservation efforts have always featured geographic dispersion. For example, we have thus far involved 36 states plus Puerto Rico and the Virgin Islands in the United States Newspaper Program, which is locating, cataloguing, and microfilming newspaper titles published in the U.S. since 1690. NEH also supports a number of other projects in widely dispersed geographic settings that collectively are quickening the pace of preserving humanities documents and other materials. These include the regional field services provided by the projects referenced in an answer to a previous question. In addition, we are encouraging state libraries, state archives, state historical societies, and other state institutions to join together to plan and coordinate preservation efforts within their borders. On March 1-3, 1989, for instance, NEH funded and co-sponsored a national conference at the Library of Congress on developing state preservation plans and programs. This conference should help to spark a greater concern for preservation throughout the country.

In the area of microfilming of brittle books, however, there is a limit to how scattered geographically the effort can or should be. For reasons of economy and to avoid unnecessary duplication of effort, the Endowment's enhanced brittle books initiative is being concentrated at the nation's major research libraries that house the premier collections of various subject areas of the humanities. Such collections represent the selection and use patterns of generations of scholars; they embody a consensus of what has been considered to be significant over an extended period of time. So, while these research libraries are located in virtually all regions of the country, their number is limited.

Question: What role is NEH taking vis-a-vis other Federal entities involved in preservation efforts, such as the Department of Education and the Library of Congress?

Answer: There are a number of other federal agencies, including the Department of Education, the Library of Congress, and the National Historical Publications and Records Commission, that are involved in preservation, and their activities complement the Endowment's programming. Our Office of Preservation maintains contact with staff at these agencies to ensure that there is no duplication of effort.

For example, NEH works with the Library of Congress on the U.S. Newspapers Program. An inter-agency agreement assigns the Library staff responsibility for quality control of the bibliographic entries in the national data base; the Endowment, in turn, is responsible for grant making and grants administration.

On March 1-3, 1989, NEH, the Library of Congress, the National Archives and Records Administration, the National Historical Publications and Records Commission, and a number of nonfederal organizations active in preservation co-sponsored a national conference, funded by the Endowment, on the development of state-wide preservation plans. Representatives from state institutions such as archives, libraries, historical societies, and university libraries met to discuss the efforts individual states have made to preserve collections of cultural and intellectual importance held by repositories within their borders.

QUESTIONS SUBMITTED BY SENATOR McCLURE

Humanities in America

In September of last year you published a report entitled "Humanities in America: A Report to the President, the Congress, and the American People." The report documents the existence of the public's inquisitiveness about the themes and subjects that make up the humanities.

According to the report, no new federal programs are needed to respond to the report's findings. Instead, several program emphases for FY 1989 and FY 1990 are planned in an effort to broaden and sustain this interest. For example, sometime this spring, the Endowment's Division of State Programs will sponsor a meeting for the chairs and executive directors of the state humanities councils that will highlight the most successful general audience programming employed by the states. It is the hope that this meeting will disseminate and highlight the most successful general audience programming employed by the states.

Question: When was the last time a similar conference was held?

Answer: Each spring the Endowment convenes a meeting of Endowment staff and the chairs and executive directors of the state humanities councils to discuss issues of common concern between NEH and the leadership of the councils. Because of the Endowment's interest in humanities education and the release of our report American Memory: A Report on the Humanities in the Nation's Public Schools, last year's meeting was organized around the theme--"The Schools and the General Public." At that meeting, state council leaders presented a series of panel discussions focussing on examples of successful education programs that have been sponsored by the councils.

This year's meeting, which is scheduled for April 14-15, will be organized around the topic of "The Parallel School." This theme grows out of one of the key findings of Humanities in America, i.e., that public programming in the humanities is now so extensive it has become a "parallel school" that exists outside of the traditional classroom setting.

Question: In the past, how was this information disseminated?

Answer: After last year's meeting, the Endowment produced a booklet that collected examples of the best humanities education projects and programs that have been initiated by the state councils. The booklet was distributed to all state humanities councils to help them plan and develop their humanities education programming. Following this year's conference, we also anticipate developing and distributing a notebook that highlights the most successful state programs that illustrate the "parallel school" concept.

Question: What other recommendations were made in the report?

Answer: Humanities in America made several recommendations, including:

-- encouraging scholarly work of general significance;

-- increasing professional recognition and reward for academic scholars who help provide high-quality programs for general audiences;

-- increasing the rewards for good teaching at colleges and universities;

-- strengthening the humanities, especially Western civilization courses, in undergraduate curricula;

-- encouraging students and parents to consider curriculum a high priority in deliberations about which college to attend;

-- continuing support for high-quality television programs based on books and other humanities subjects;

-- increasing availability of humanities films and television programs through better pricing and distribution systems; and

-- encouraging more citizen involvement in the effort to promote coherent and substantive humanities education in schools and colleges.

Question: At last year's hearing you indicated that you scheduled three meetings with people from public television, museums, and libraries and others who were interested in the humanities. What has been the reaction at those meetings to the report and the recommendations?

Answer: The three meetings took place before the report was prepared and issued. The purpose of those meetings was to tap the expertise of individuals knowledgable about the topics that were to be covered in Humanities in America. Before writing the report, the Chairman also met with experts in the humanities at fourteen regional forums held at sites across the country. The comments of all these men and women gave form and life to the data we compiled for the report, and they were quoted often in the text.

In general, reaction to the report has been quite favorable, particularly from those involved with efforts to bring the humanities to public audiences.

Charles Frankel Prize

Question: The Endowment recently established the "Charles Frankel Prize" to be awarded to up to five individuals to acknowledge the work of individuals who have made major contributions in helping audiences develop a greater understanding of the important texts, themes and ideas of the humanities.

How will the Charles Frankel prize help to transmit knowledge of the humanities to future generations?

Answer: The prize will honor men and women who have made particularly important efforts to disseminate knowledge of the humanities--exactly what is necessary if future generations are to have knowledge of them. By honoring such men and women, we hope to play some small part in increasing their numbers.

Reader's Digest Contribution

Question: In 1988, Mr. DeWitt Wallace, founder of "Reader's Digest" contributed $1.5 million in support of an effort to provide sabbatical support to outstanding school teachers. This $1.5 million will provide one third of the cost of the program over the next three years.

In response to this program, the Endowment received 615 applications and 53 awards are expected sometime in 1989.

What is the status of these awards?

Answer: The fifty-three Teacher-Scholar grants for the FY 1989-90 academic year have all been awarded. In the fall, these Teacher-Scholars--one from each state, the District of Columbia, Puerto Rico, and the Virgin Islands--will begin their one-year sabbaticals.

Question: How are you using this contribution to expand private support of the Endowment's programs?

Answer: By naming this program as we did--the NEH/Reader's Digest Teacher-Scholar Program--we have explicitly recognized the contribution that private support has made to giving teachers this opportunity to undertake full-time independent study in the humanities.

We hope that the generosity of the fund at New York Community Trust established by DeWitt Wallace will move others to consider giving on behalf of NEH-supported projects and the humanities in general. The success of our matching and Challenge Grant awards depends on the willingness of private individuals, organizations, and corporations to continue giving to our grant recipients. Beyond that, we hope that this program will serve as an outstanding example of the important role of private giving in support of education and culture.

Columbus Quincentenary

Question: It is my understanding that the level of interest in the Endowment's initiative for the Columbus Quincentenary has not been as strong as expected.

At last year's hearing you indicated that, while no specific amount has been allocated for this effort, an additional $500,000 was requested. Through February of 1988, the Endowment has obligated $5.2 million.

With the interest in the program lower than expected, how have you altered your efforts?

Answer: Last year, the Endowment requested a $500,000 increase for the Public Humanities Projects program because we anticipated a significant increase in planning proposals for public projects related to the Columbian Quincentenary and the Bicentennial of the Bill of Rights, and because we have been encouraging larger-scale projects of regional or national scope that are capable of reaching a more diverse audience than purely local events.

The response by applicants to the Endowment's Columbian Quincentenary initiative has been a gratifying strong one. It is true that the applicant response to our invitation to submit Quincentenary planning proposals to the Public Humanities Projects program has been somewhat disappointing, both in numbers and quality, and our lower request for that program in FY 1990 reflects that. However, we have recently been able to fund a number of impressive Quincentenary proposals in the Humanities Projects in Museums and Historical Organizations and the Humanities Projects in Libraries and Archives programs.

As of February 1989, obligations for Quincentenary projects supported by programs throughout the agency have grown to $6.7 million.

Question: What type of effort do you anticipate for FY 1990?

Answer: We expect to continue awarding planning grants and to begin awarding implementation grants for public programs related to the Quincentenary. And, through other NEH divisions, we will continue to support multi-year research projects, fellowships, seminars, and teacher institutes devoted to Quincentenary topics.

We think this anniversary will be of special interest to museums, historical societies, and other institutions and organizations in Florida and the southwest.

National Center for History in the Schools

Question: In April of 1988, the Endowment established the National Center for History in the Schools at the University of California at Los Angeles (pgs. 4 and 19). This new Center is charged with the task of determining how to address the findings of recent studies showing that America's young people know little about their own history or that of other nations. The cooperative agreement is subject to renewal in 1990. Now that the Center is nearly a year old, how would you assess its potential?

Answer: We are encouraged by the progress the History Center has made in its first year. By the end of May, the Center will have:

* produced a major policy paper for state legislators, school boards, parents, and teachers that will define and justify history's essential role in the education of all children;

* completed its work with history scholars to identify the essential historical knowledge that students should acquire before graduation from high school;

* collected curriculum guides from all 50 states and prepared a report on the nature and extent of history instruction required in the various states;

* analyzed published reviews of history textbooks to identify gaps that the History Center must address in order to provide the schools with authoritative analyses of the history materials currently available for classroom use; and

* conducted an American history institute and a world history institute to enable 45 outstanding elementary and secondary school teachers to develop improved programs for dissemination to schools throughout the country.

In its second year, the Center will:

* conduct a survey of a nationally-representative sample of history teachers to determine which approaches and materials are commonly used in history classrooms;

* prepare a secondary analysis of high school transcript data that document the number and kinds of history courses completed by students;

* conduct a study of credentialing and certification requirements for history teachers throughout the nation;

* engage in follow-up analyses of history textbooks not previously examined;

* conduct a summer institute involving successful participants of previously-funded NEH institutes to develop history materials; and

* engage in a variety of dissemination activities.

Given the scope of these projects, we think the Center has significant potential to affect the way history is taught in the nation's schools.

Question: Do you have renewal plans for the Center?

Answer: The cooperative agreement that established the History Center stipulated that funding for each year of the Center's operations is contingent upon satisfactory completion of the previous year's activities. The Center must submit quarterly progress reports throughout the three-year period of the agreement to document progress in achieving its goals and objectives. And to ensure that each year's activities are carefully planned, updated workplans for the major History Center initiatives are required six weeks before the start of each project year.

Assuming continued success in its activities, the Center will be funded by NEH through April of 1991. Currently, there are no plans to continue Endowment funding beyond 1991.

State Programs

Question: In FY 1989, Congress provided an additional $3.7 million (+17%) for State Programs (pg. 63). This increase was in response to increased interest by the states and the fact that the states have done a better job in recent years putting their request together.

I note with pleasure that in your FY 1990 budget request, you have included the $3.7 million increase.

What made you decide to include the increase in the FY 1990 budget and not in the FY 1989 budget?

Answer: In the process of researching and writing the report Humanities in America, we discovered a growing popular interest in cultural activities--in museum exhibitions, library reading and discussion programs, and enriching and informative television programs--has grown impressively. It seems that our increasingly educated population is intent on extending the learning process beyond the years of formal instruction, in effect making it a lifelong pursuit.

The state councils are an important part of this. Twenty-five million people a year now participate in council-sponsored programs. Over the years, state councils have become increasingly skilled at offering substantive programs in local communities, as the rising quality of their funded projects attests. They can now reach communities remote from, or overlooked by, other cultural institutions, and they are capable of providing sustained programming--a far more effective approach to learning than the occasional one-shot event.

As the scope and effectiveness of the councils have grown, so have their budgetary requirements. For example, their administrative funds have not kept pace with inflation and the growth of their operations. We believe that State Programs funding at the level requested is amply justified by the importance of what the state councils are doing and by the quality of the humanities programs they support.

Brittle Books

Focusing on the alarming estimates that 77 million volumes (25 to 30 percent) of the holdings in the country's research libraries are disintegrating, Congress provided an additional $8 million in FY 89 to address the problems of deteriorating books (pg. 71). The centerpiece of this effort is enhanced support to microfilm brittle books.

The Endowment convinced the Administration to retain this increase and to request an additional $1.0 million for FY 90.

Question: Can you briefly detail the funding plan for this program?

Answer: The plan we presented to Congress last year projected a series of gradual annual funding increases for the Office of Preservation that by FY 1993 will put us into position to microfilm a total of 3 million volumes--the number of significant, non-duplicative volumes that currently are or will become at risk during the next 20 years. The focus of the plan is to increase federal support for the microfilming of brittle books, but the plan also accelerates the Endowment's commitment in other preservation areas such as the education and training of preservation administrators, research and development projects, the U.S. Newspaper Program, and the preservation of special collections of documents and materials held by American libraries, archives, and other institutions.

Our annual funding projections for the Office of Preservation are as follows:

FY 1989:	$12.33 million
FY 1990:	$13.50 million
FY 1991:	$15.80 million
FY 1992:	$17.70 million
FY 1993:	$20.30 million

Question: How are you obligating the additional $8.0 million for FY 89?

Answer: Our estimated obligation of FY 1989 funds, distributed among our various preservation activities, is as follows:

FY 1989: $12.33 million

-- $7.5 million for preservation microfilming of brittle books (includes consortial projects and projects at individual research libraries);

-- $2.2 million for the United States Newspaper Program;

-- $0.63 million to preserve special collections at humanities institutions;

-- $1.0 million for education and training of preservation personnel; and

-- $1.0 million for other preservation activities--including regional information and consultation services, state planning projects, and research and development.

Question: Were you required to find an offset in order to retain this increase?

Answer: No. For FY 1990, a number of adjustments were made in program budgets (compared to estimated FY 1989 obligations), but these changes were independent of funding in preservation. They reflect, instead, our plans and priorities, our analysis of program application and grant statistics, and our assessment of the capabilities of the humanities field.

Question: How are you soliciting private support for this effort?

Answer: Stimulating private support for preservation efforts continues to be a major priority of the Endowment. Accordingly, federal matching funds are used as the means to fund projects wherever possible. In FY 1988, for example, we matched $1.52 million in third-party contributions to preservation projects supported by the Endowment. This represents a 400 percent increase over the $294 thousand matched in FY 1987. As we started FY 1989, more than $2.4 million in matching offers to preservation grantees were still outstanding. Additional matching offers will be made as we make new grants during FY 1989.

Institutions and organizations receiving NEH preservation support are also expected to make significant cost-sharing commitments to their projects. If a project deals with materials at a single institution, for example, Endowment support normally will not exceed 50 percent of the total project costs.

The Endowment is also working to generate nonfederal support for preservation activities by increasing public awareness of this problem. For example: With a matching grant from the Endowment, a gift from the Andrew W. Mellon Foundation, and additional contributions from the Exxon Educational Foundation, the Council on Library Resources produced a documentary film on preservation, Slow Fires: On the Preservation of the Human Record. Narrated by Robert MacNeil, the film traces the causes and impact of the ever-widening destruction of our intellectual heritage. During 1988 the film was viewed by millions of Americans on PBS stations and at special presentations around the country. It will be rebroadcast nationally on PBS in 1989. Over 800 copies of Slow Fires have been purchased on film or cassette by universities, schools, libraries, archives, historical societies, book manufacturers, and paper companies. We hope this film will lead to a growing understanding within our society that only a concerted effort by many groups and institutions will ensure the survival of that vast portion of our intellectual and cultural heritage now in jeopardy.

Challenge Grants

In recent years there has been an alarming drop-off in applications for Challenge Grants (pg. 78). In FY 87, there were 209 applications and 41 awards; in FY 88 there were 184 applications and 29 awards; and in FY 89, there were 139 applications and 35 awards.

Question: How much of this decrease do you attribute to the new policy requiring a 4 to 1 match for second-time proposals instead of a 3 to 1 match?

Answer: Some potential applicants for second Challenge awards may have been discouraged by our new policy of requiring a 4:1 match for second-timers instead of the 3:1 match of previous years. We feel that this extra matching requirement is justified, however, because an institution that had a first challenge grant already should be a successful fund raiser; a second award also ought to provide an even stronger incentive for an institution to extend its donor base.

Question: Are you still receiving the same number of first time applications as you did before the new matching formula was initiated?

Answer: No, first-time applications have declined since the new matching requirement for repeaters was established two years ago.

Question: In the FY 89 justification, you anticipated receiving 200 applications and making 40 awards. The actual number of applicants was 139 and you made 35 awards. Your FY 90 justification indicates that the number of applications will again rise to 200. Why were applications for FY 89 lower than expected?

Answer: When we submitted our FY 1989 justification to Congress, we were assuming that the drop in applications in FY 1988 to 184 (down from 209 in FY 1987) was an anomaly. We projected, therefore, that applications would rise again in FY 1989 to about the FY 1987 level.

We have no definitive explanations for the decline in applications in FY 1989. Factors that may have contributed to the decrease include:

-- The rigor of the grant competition--only 16 percent of applications received awards in FY 1988, for instance--may have been a disincentive for some institutions, especially smaller ones, to go through the effort of preparing Challenge grant proposals;

-- Second-time applicants had previously been required to wait a minimum of two years from the close of their first award to apply for a second. This policy may have been a deterrent to some potential applicants. (The waiting period has recently been dropped, however. Beginning with the FY 1990 cycle, grantees will be permitted to apply for a second grant as soon as their first award is completed.); and

-- As discussed in a previous question, the 4:1 matching requirement for second timers may have deterred some applicants.

Question: Why do you anticipate applications to increase from 139 in FY 89 to 200 in FY 90?

Answer: As stated in the preceding response, the two-year waiting period for second-time applicants has been dropped; applications from second timers should increase as a result. In addition, we have planned a number of special emphases for Challenge in FY 1990 that should help to pump some new life into the program:

-- Special efforts are underway to stimulate more applications from HBCUs for the FY 1990 cycle;

-- Museums, libraries, and other general audience institutions will be encouraged to create endowments to support internships for scholars, graduate students, and recent doctorate recipients in the humanities; and

- Increased emphasis will be put on efforts to improve humanities education:
  - Higher Education institutions will be encouraged to endow programs to recognize superior teaching among their faculty; and
  - National scholarly groups and organizations will be encouraged to endow programs for the intellectual growth and recognition of teachers in elementary and secondary schools.

Question: If you anticipate the number of applications to increase by nearly 50 percent, why are you requesting a $2.0 million decrease?

Answer: The funding decrease for FY 1990 is not related to the estimated volume of applications. Challenge is being reduced in FY 1990 because it will no longer be making annual $2 million special awards to the New York Public Library. What appears to be a reduction for the Challenge program, therefore, is in fact a steady allocation if the previous level of support for NYPL is excluded.

The funds requested for FY 1990--$14.7 million--are sufficient for us to meet all previous commitments to current grantees and to award a significant number of new grants.

QUESTIONS SUBMITTED BY SENATOR DeCONCINI

Humanities Education

Question: Chairperson Cheney, in your report titled, Humanities in America, you found that the "blossoming of the humanities so evident in the public sphere..." has not extended to the nation's schools and colleges. I certainly find this troubling. Could you please tell me what the Endowment is doing to address this deficiency in developing a sense of our cultural and historical foundations in our young people?

Answer: We have discovered that simply offering information and reasoned arguments to the public is one of the most effective things we can do to promote change in education. In reports such as American Memory, our study of the humanities in the nation's public schools, and most recently in Humanities in America, we have tried to assess, as realistically as we can, the cultural and historical grounding that young people receive in our schools and colleges. At the same time we have tried to make the case for substantive humanities instruction at all levels of education as persuasively as we know how.

The recommendations contained in these reports are not only for the edification of others; several of the program emphases that we are currently implementing or planning for FY 1990 were prompted by our findings in American Memory and Humanities in America. For example, Humanities in America calls on institutions of higher education to counter the excesses of disciplinary specialization, work more closely with other cultural organizations, and reward academic scholars who help provide high-quality programs for general audiences. Beginning in the spring of 1989, the Endowment will annually award the Charles Frankel Prize to up to five individuals who have made a major contribution in helping audiences develop a greater understanding of the important texts, themes, and ideas of the humanities. Similarly, the Teacher-Scholar program--which provides support for one year of independent study and research to one school teacher in each state, the District of Columbia, Puerto Rico, and the Virgin Islands--and the new National Center for History in the Schools both follow up on recommendations contained in American Memory.

In FY 1990, several of our currently existing programs will continue to address the problems in our schools and colleges that we have described. By supporting such activities as institutes, masterwork study groups and faculty study projects, collaboratives among schools and colleges, and conferences, the Endowment's Division of Education Programs is helping to redirect attention at all levels of education toward important texts and themes in the humanities, and it is providing varied opportunities for humanities teachers in our schools and colleges to become more knowledgeable about the subjects they teach. The Endowment's Summer Seminars for College Teachers and Summer Seminars for School Teachers programs also enrich teaching and learning by permitting participating teachers to study important works in the humanities, conduct research at major institutions, and to test their ideas and insights before a knowledgeable body of colleagues.

Question: The Endowment's FY 1990 budget request shows a modest increase for Education programs. In view of the need to expand our efforts in teaching the humanities in our nation's schools and colleges, is the amount requested sufficient to address the problems described in your report?

Answer: It is our judgment, based on a careful assessment of the quality and quantity of applications recently submitted in this division, that the funding level we are requesting for Education Programs in FY 1990 will be sufficient to support all of the truly meritorious projects.

Of course, no conceivable NEH budget would alone be sufficient to address the far-reaching problems as we have described in Humanities in America. By long standing tradition, our schools and colleges are primarily the responsibility of state and local government and the private sector. NEH, as a federal agency, can play an important role by suupporting scholarship, research, education, and public programs; but it should also be a limited role.

Fellowships and Seminars

Question: The FY 1990 budget justification for the Endowment states, "...the mission of the Division of Fellowships and Seminars is to recognize and support teaching and research of the highest quality in the humanities." The budget, however, appears to indicate the contrary in that there is a reduction in the amount of funding requested for this program. Will the Endowment be able to accomplish the stated mission of this program with the funds requested for FY 90?

Answer: Yes, the funding we have requested for the Division of Fellowships and Seminars for FY 1990 will be sufficient to enable the Endowment to continue to support high quality scholarly research and summer seminars for teachers in the humanities. The funding reduction for FY 1990 is slight--only about one percent below the FY 1989 appropriation.

Question: Could you please elaborate on what the Endowment does to "recognize" high quality teaching and research in the humanities?

Answer: Through the awards we make in the Division of Fellowships and Seminars, the Endowment "recognizes" superior scholarship and teaching in the humanities. Competition for grants in the division is intense, as it should be; in the two fellowships programs, for example, after undergoing evaluation in our peer review system only about 15 percent of applications receive awards. As a result, the scholars who are awarded fellowships and stipends and the teachers who are selected to participate in NEH-sponsored summer seminars are acknowledged by their colleagues for having attained a high level of achievement. Endowment awards carry a great deal of prestige in the national humanities community.

Challenge Grants

Question: The FY 1990 budget request shows a significant reduction in the Challenge Funds program. The purpose of this program, as I understand it, is to stimulate the private giving to Humanities Institutions by encouraging long-range institutional planning and by providing incentives for recipients to develop long-term sources of income. Institutions are required to match the federal funds from non-federal sources. This seems to be one of the Endowment's most cost effective programs and yet it is being cut significantly. Could you please provide the rationale for this budgeting decision?

Answer: The reason we have proposed a budget reduction in Challenge Grants is that in FY 1990 the Endowment will no longer be making annual $2 million special grants to the New York Public Library (NYPL) through the program. The allocation for FY 1990 is essentially equal to the amount of the FY 1989 appropriation for the program when the special grant to NYPL is taken into account. Our commitment to the mission of the Challenge program is, in fact, unwavering. We agree that the Challenge program is an important mechanism for the Endowment to use to help humanities institutions raise and leverage third-party contributions. Encouraging nonfederal donations to humanities projects and institutions remains a high priority of the Endowment and the Administration in FY 1990.

State Programs

Question: The FY 1990 budget request for the Endowment shows no growth in State Programs. Since these programs have the largest constituency that the Endowment serves, will you be able to continue to support the various humanities councils throughout the nation with this budget?

Answer: We believe that the level we are requesting for State Programs in FY 1990 will enable the state humanities councils to run effective, exemplary humanities programs in all regions of the country. The level also is responsible and appropriate in light of the necessarily limited resources of this agency and of competing needs elsewhere in the Endowment. For one thing, level State Programs funding in FY 1990 would be essentially in line with our overall budget request, which entails an increase in funds of less than two-tenths of one percent. For another, State Programs appropriations increased by 17 percent in FY 1989 over the year before. Because of that previous funding increase, we feel this present request level properly takes into account recent growth in the scale and quality of the state councils' grant-making activities, as well as their rising administrative costs.

Question: Could you please provide me with the state by state distribution of the funds in the state programs for the last five (5) fiscal years?

Answer: Please see the following charts.

Division of State Programs

Distribution of Definite Program Funds

State	FY 1986 (actual)	FY 1987 (actual)	FY 1988 (actual)	FY 1989 (estimate)	FY 1990 (estimate)
Alabama	$324,920	$333,610	$347,545	$395,000	$395,000
Alaska	339,979	345,150	360,015	415,000	415,000
Arizona	298,000	323,160	324,000	386,000	386,000
Arkansas	303,940	311,740	326,565	374,000	374,000
California	580,930	624,890	655,097	777,097	777,097
Colorado	299,000	323,340	339,244	385,000	385,000
Connecticut	314,520	323,110	336,012	384,000	384,000
Delaware	286,829	289,570	304,498	352,000	352,000
D.C.	280,000	289,590	303,408	352,000	352,000
Florida	400,360	431,578	450,720	520,720	520,720
Georgia	348,999	359,680	377,101	428,101	428,101
Hawaii	333,439	338,350	354,277	407,000	407,000
Idaho	283,000	294,150	308,932	357,000	357,000
Illinois	426,899	431,640	444,933	513,933	513,933
Indiana	345,880	355,348	366,413	415,413	415,413
Iowa	316,909	318,910	332,372	379,000	379,000
Kansas	305,280	315,758	326,033	375,000	375,000
Kentucky	321,920	330,390	342,103	390,000	390,000
Louisiana	329,280	339,510	352,077	399,000	399,000
Maine	288,890	296,810	309,810	359,000	359,000
Maryland	329,340	338,140	353,377	400,000	400,000
Massachusetts	348,950	359,688	370,726	420,726	420,726
Michigan	394,260	402,178	414,281	475,281	475,281
Minnesota	327,730	336,320	351,094	397,000	397,000
Mississippi	306,960	305,000	327,637	377,000	377,000
Missouri	338,390	326,000	360,679	407,679	407,679
Montana	284,420	292,410	304,278	355,000	355,000
Nebraska	299,069	302,630	314,459	364,000	364,000
Nevada	284,480	296,508	307,081	357,000	357,000
New Hampshire	290,239	294,120	309,171	358,000	358,000
New Jersey	370,030	382,868	394,089	450,089	450,089
New Mexico	286,000	299,990	314,980	363,000	363,000
New York	501,360	516,088	526,231	616,231	616,231
North Carolina	354,789	362,830	379,875	430,875	430,875
North Dakota	282,840	292,468	302,723	353,000	353,000
Ohio	418,199	421,380	436,587	502,587	502,587
Oklahoma	314,160	324,630	336,259	385,000	385,000
Oregon	308,450	318,738	329,038	378,000	378,000
Pennsylvania	428,610	438,598	449,368	519,368	519,368
Puerto Rico	316,110	326,148	336,251	385,000	385,000
Rhode Island	287,120	294,000	308,884	357,000	357,000
South Carolina	301,000	324,820	340,767	387,000	387,000
South Dakota	283,000	293,558	302,873	353,000	353,000
Tennessee	333,970	346,308	357,674	404,000	404,000
Texas	458,880	494,610	513,033	599,033	599,033
Utah	293,350	302,790	315,808	365,000	365,000
Vermont	281,222	288,210	301,221	351,000	351,000
Virginia	343,250	355,570	370,924	420,924	420,924
Virgin Islands	205,659	201,450	213,326	231,000	231,000
Washington	332,199	339,210	335,000	400,000	400,000
West Virginia	299,480	299,000	318,687	368,000	368,000
Wisconsin	335,460	346,358	356,479	404,000	404,000
Wyoming	281,050	288,100	299,986	351,000	351,000
	17,549,000	18,087,000	18,814,001	21,650,057	21,650,057
Discretionary	2,630,000	2,913,000	2,485,999	3,349,943	3,349,943
Allocation	$20,179,000	$21,000,000	$21,300,000	$25,000,000	$25,000,000

NOTE: In addition, the state humanities councils also receive an annual allocation of Treasury matching funds.

DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

STATEMENT OF T S ARY, DIRECTOR

ACCOMPANIED BY:

- **JOHN D. MORGAN, JR., CHIEF STAFF OFFICER**
- **ROBERT F. FAGIN, ASSOCIATE DIRECTOR FOR FINANCE AND MANAGEMENT**
- **DAVID S. BROWN, ASSOCIATE DIRECTOR FOR INFORMATION AND ANALYSIS**
- **DAVID R. FORSHEY, ASSOCIATE DIRECTOR FOR RESEARCH**
- **JAMES F. DONAHUE, CHIEF, DIVISION OF BUDGET**
- **ANTHONY L. ITTEILAG, DIRECTOR, OFFICE OF BUDGET, OFFICE OF THE SECRETARY, DEPARTMENT OF THE INTERIOR**

PREPARED STATEMENT

Chairman BYRD. T S Ary will be testifying on behalf of the Bureau of Mines, he is the Director of the Bureau. Mr. Ary, you may present your associate or associates, and your statement, you may read in full or you may summarize it. In any event, it will be included in the record in its entirety.

Will you proceed.

[The statement follows:]

STATEMENT OF T S ARY

Mr. Chairman, I appreciate the opportunity to appear before the subcommittee to discuss the Bureau of Mines fiscal year 1990 budget, which sets forth the proposed priorities and directions for the Bureau to carry out its mission. For fiscal year 1990, the Bureau's Budget Request is $141,197,000, which is almost $15 million more than President Reagan's 1989 budget.

The Bureau of Mines, like the U.S. minerals industry, has undergone a restructuring. As a result, the Bureau has sharpened its focus to ensure an adequate and dependable supply of minerals and mineral-based materials to meet our economic and defense objectives as we enter the decade of transition to the 21st century. The Bureau carries out its mission by acquiring and analyzing global minerals data, by conducting research to enhance mining and mineral processing safety and efficiency, and by estimating the consequences of Federal policy options impacting the cost and availability of specific mineral commodities.

A continuing profile of our program finds significant attention is given to worker health and safety, to environmental compatibility of mining and mineral processing operations, to mineral resource accessibility and conservation, to innovations in the U.S. mining industry, and to the impact of regulations on mineral industries.

The Bureau's fiscal year 1990 budget continues to emphasize the major new initiative areas of advanced materials, regulatory issues, waste management and recovery, innovative mining and processing technology, robotics and automation, and mineral land assessments which we presented to you in fiscal years 1988 and 1989. We firmly believe that these are innovative, exciting, and cost effective approaches to health and safety, environmental protection, resource conservation, and efficiency improvement. These initiatives represent new approaches to push the state of the art and advance the technology of the United States to deal with these problems in creative and innovative ways. We are proposing new Bureau efforts to provide the essential technological and scientific knowledge to innovative approaches and to lay the groundwork for applications to be developed by private industry. The Bureau has already begun to move in these directions. With your continued support, we will continue that movement.

This budget continues those high priority initiatives contained in President Reagan's fiscal year 1989 budget. The redirection of existing resources has financed some of these initiatives in past years and will allow the Bureau to explore further initiatives in fiscal year 1990. We have added an initiative on Alaskan strategic and critical minerals within existing resources.

While such initiatives pose challenges of high-risk and high-reward, we will continue to maintain a base level of effort to solve high priority health, safety and environmental problems as they are identified by our researchers and the regulatory agencies, and to refine existing technologies to achieve additional improvements.

During fiscal year 1990, the Bureau expects to move its headquarters from Columbia Plaza to another location within the District of Columbia and to phase out its general purpose computer center in Denver. Additional funds will be required for the Headquarters move and to obtain a minicomputer and software to meet the Bureau's internal ADP needs. These actions promise long-term savings, but impose some additional short-term costs.

The 1990 Budget assumes the sale of the Helium Program assets during fiscal year 1990, as part of the Administration's effort to shift Government services to private providers. The goals of the Federal Helium program, conservation of helium to meet Government needs and promotion of a viable private helium industry, have both been met. Therefore, we believe, and the Administration has concluded, that it is time for Government to decrease its role as provider of helium to Federal agencies. Means of implementing the sale of the Helium program assets, and dealing with related issues, are still under review. I hope you will support us in this endeavor.

The Mineral Institute Program was initiated to provide seed money to encourage the development of mineral-related Government/industry/university research and graduate education programs at selected State colleges and universities. The States have responded and the programs are in place. The majority of the support at these schools comes from non-Federal sources. Accordingly, this program is no longer an appropriate use of Federal funds, as State and private resources are adequate to continue the program at an appropriate level.

ADVANCED MATERIALS

Advanced materials are those developed during the past three decades, or still under development, such as advanced metals, ceramics, polymers, and composites, that exhibit greater strength, higher strength-density ratios, greater hardness, or superior thermal, electrical, optical, or chemical properties, when compared to traditional materials. Advanced materials promise to decrease energy consumption, improve performance at lower cost, and lessen dependence on imports of strategic and critical materials.

Advances in materials science stimulate the growth of many sectors of the economy. New materials and processes make existing industries more competitive and give birth to new technology. Encouragement or stimulation of the commercialization process through basic and applied research has been made a Federal responsibility through the enactment of several technology transfer and technology innovation statutes, and it is in this area that the Bureau's efforts are focused. The Bureau's Advanced Materials efforts have a dual thrust, involving both research and information and analysis efforts. The Information and Analysis program will seek to collect and disseminate data on advanced materials to analyze supply/demand trends, analyze the role of advanced materials as substitutes for traditional materials and their impacts on the Nation's mineral industries and economy, as well as efforts to quantify the effects of intermaterial competition. Research efforts will focus on advanced ceramics and intermetallic composites, which hold promise for important gains in wear and corrosion resistance and as substitutes for certain strategic and critical metal applications.

Competition between new and conventional materials for use in commercial products is affected by many factors including security of supply, environmental, health and safety, and economic implications across the entire materials cycle from mining to disposal (or recycle). Thus, many of the barriers to commercialization of new materials are not traditional areas of private sector research and development (R&D) activities and fall into the long-range, high-risk category that requires Federal involvement to achieve this important national objective.

REGULATORY ISSUES

Regulatory compliance has imposed major costs on the U.S. mineral industry. This trend is likely to continue, potentially affecting the competitive position of domestic producers. The objective of this initiative is to expand current regulatory analysis efforts in the Bureau's Information and Analysis Directorate to ensure that estimates of the economic benefits and costs of alternative regulations for the minerals industry are available to decision makers. The specific goals of these efforts ensure that regulations are adopted only after their effects have been fully considered so that they objectively: (1) are cost effective, (2) fully consider competitiveness impacts, and (3) are technically sound.

In the environmental area, over the next several years, the Environmental Protection Agency (EPA) will undoubtedly develop a regulatory program for mine wastes and ambient air regulations for smelters. Proposed acid rain legislation may be passed by the Congress and certain States. These actions may prove costly to the domestic nonfuel mineral and coal industries. The potential costs to the domestic minerals industry of complying with these regulations could seriously impair the viability of some sectors.

The costs of compliance with proposed regulations depend on the specifics of proposed regulations, site-specific characteristics, and the relative competitive position of each producer. The Bureau's efforts will assist EPA's regulatory activities by accounting for site-specific differences, the relative competitive position of domestic producers, and the cost-effectiveness of alternative regulations. The cost and economic impact assessments proposed in this initiative will provide expanded site-specific analysis of alternative approaches to regulating mine and mineral processing wastes. The Bureau of Mines has extensive experience and expertise in this area, and is providing a valuable service to the decision-making process.

Likewise, anti-trust, taxation, and transportation regulations as they relate to the minerals industry also should be cost-effective. Current anti-trust policies were designed for the domestic economy of 100 years ago, and may no longer be appropriate for industries competing in world markets. Under this proposed effort, assessments of the impacts on the domestic minerals industry's competitiveness as well as alternative approaches in each of these three additional regulatory areas will be conducted.

WASTE MANAGEMENT AND RECOVERY

Mineral production results in the generation of vast quantities of wastes. Some of these wastes from active or abandoned mining, mineral processing, and metals recycling operations have the potential to cause serious hazards to human health and the environment. Regulations covering wastes from active mining and processing operations are currently under development by EPA. Compliance with these regulations could be very costly and will require development of new waste management methods. An opportunity exists for conducting the research necessary to allow these new waste management methods to be developed before the new regulations take effect in the early 1990's.

The liability for permanent cleanup of waste from past operations is already mandated by Federal law. Slow progress on cleaning up hazardous waste sites has resulted in increasing public concern. Where cleanup has been attempted, costs have been astronomical with little guarantee of a permanent solution to the problem. In many cases, the technology required for permanent solutions simply does not exist. However, extensions of extractive metallurgical technology offer high potential for development of the necessary technology.

The Bureau is proposing to expand its efforts to develop methods to eliminate or reduce environmental problems associated with minerals wastes. Basic research in biotechnology will be expanded to take advantage of the fact that this technology offers excellent opportunities for extracting toxic metals from mining and mineral processing wastes. Additional research on new approaches to waste management and cleanup will be conducted on environmental problems caused by mine overburden, leaching residues, tailings, metallurgical processing wastes, and materials recycling wastes.

This research will produce improved scientific data on problems caused by mining, mineral processing, and recycling wastes; innovative approaches for managing and controlling these wastes that reduce the potential for environmental damage; new methods of employing biotechnology to decontaminate wastes containing low concentrations of toxic components; and generic cleanup technologies applicable to soil and water contamination of hazardous waste sites.

INNOVATIVE MINING AND PROCESSING TECHNOLOGY

The domestic mining industry has faced new challenges in recent years that, for some components, threatens its existence. To mount a serious attack on the economic problems of the mining industry while improving the health and safety of the mining labor force, the Bureau recognized that totally new ways to mine must be developed.

Previous Bureau of Mines research has shown that both copper and uranium can be dissolved from their respective host rocks underground, or in-situ. Thus, only a leach solution need be pumped underground and returned to the surface. The waste is left in place, eliminating mining, hauling, crushing, grinding, and smelting tons of solid materials that would require disposal ultimately. Major health, safety, energy consumption and environmental problems also appear to be eliminated. However, in-situ metal recovery poses a different set of problems. Present research focuses on finding solutions to critical technical problems hampering widespread adoption of in-situ leaching methods. The research includes solution control technology, methods for improving solution flow through a deposit, applications of biotechnology to improve leaching performance, potential application to strategic and critical metals, and evaluation of leaching technology for metals in deep, thin deposits. Parallel studies are identifying characteristics of ore deposits that determine amenability for leaching, and tracking the movement of leaching solutions through the ground. Federal research will hopefully reduce the mounting environmental and social costs of conventional mining technology.

ROBOTICS AND AUTOMATION

Past Bureau efforts in robotics and automation have largely addressed mining health and safety issues. The objective of utilizing automation and robotics in the mining environment is to redeploy the mine worker to a safer, more healthful environment. Research has identified basic principles that can be utilized to make a coal mining machine guide itself while cutting coal, identify the edge of a coal seam, and diagnose electrical and mechanical failures. Present and planned research is to find the basis for technology through which these principles can be used to control a machine in real time. The Bureau will also expand its efforts in this area to include research to provide the technology necessary to apply robotics and automation to minerals beneficiation.

Bureau flotation research has resulted in new separation principles (control of the flotation response of a mineral without chemical modifiers and external generation of fixed diameter bubbles for column flotation) that can readily be automated. Bureau scientists, working with several sulfide mineral processors, have substantially completed research showing that flotation control without chemical modifiers is feasible for real ores under mill conditions; and that the flotation column can be computer controlled. However, before the industry can fully realize the benefits of these breakthroughs, several additional tasks must be addressed: mathematical algorithms must be developed that relate metal grade and recovery to the properties of the ore being separated and to the adjustable parameters of the separation process; and sensors must be devised to measure the adjustable parameters.

This research, started in 1968, has been highly successful. Additional research in the development of mathematical algorithms, in part controlled by artificial intelligence, is planned. Research will provide the technology base needed to automate advanced minerals recovery systems of the future. It will include investigations of use of artificial intelligence in control of operations and the sensor systems needed to measure appropriate control parameters. At the appropriate time, cooperative cost sharing with industrial producers will be sought to provide operational testing experience of this research and to expedite technology transfer.

MINERAL LAND ASSESSMENTS

The Bureau proposes to continue its efforts to estimate the potential supply of minerals from undiscovered as well as discovered deposits in the States of Nevada and Idaho. The potential value of mineral resources (discovered and undiscovered) to the local and State economies will also be estimated.

This assessment will be based on a unique analytical system, the Potential Supply Analysis System (PSAS), which uses the results of geologic field work and mineral production cost estimating procedures to estimate the quantities and values of the undiscovered minerals which may be contained in an area, and the number of additional jobs, income, and tax revenues that would be generated in the local and State economies if both undiscovered and discovered mineral resources were to be developed and produced. Quantitative information about the opportunity cost of restricting access to lands which are favorable for undiscovered non-fuel minerals has never before been made available to land managers and public policy makers.

Several projects involving the Bureau, the U.S. Geological Survey (USGS), the Alaska Division of Geological and Geophysical Surveys (ADGGS), and Idaho and Nevada State agencies have been completed or are underway. In a joint project with the USGS, the Bureau completed a pilot Potential Supply Analysis of the undiscovered gold and silver resources in the Tonopah Quadrangle of Nevada.

Under this initiative, the Bureau will provide potential supply analyses for the States of Idaho and Nevada, two mineral-rich States with large amounts of Federally-owned lands. In the State of Idaho, more than 30 minerals designated as strategic or critical have been identified, and 20 of these are currently being produced or have potential commercial production capability. Large amounts of these and other minerals remain to be discovered. Since over 63 percent of Idaho is owned by the Federal Government, many of the undiscovered mineral deposits will be located on public lands. Public land-use decisions will, therefore, largely determine the future of the State's mineral industry. Similar circumstances exist in the State of Nevada. This initiative is a cooperative undertaking with the U.S. Geological Survey, the State geological surveys, and the State universities.

ALASKAN STRATEGIC AND CRITICAL MINERALS

The State of Alaska has the highest potential for undiscovered deposits of critical and strategic minerals in North America. Work by both the U.S. Geological Survey and the Bureau of Mines has identified the presence of cobalt, chromium, manganese, platinum-group metals and many other strategic minerals.

The Bureau's work focuses specifically on strategic minerals in order to identify favorable mineralization of strategic and critical minerals, provide the basis for technology to recover minerals in an economic and environmentally safe manner, and provide information for informed land use decisions. Resource identification and assessment is carried out cooperatively with the USGS and the ADGGS.

Alaska poses unique problems for mineral recovery. The Arctic conditions, remote location, and environmental concerns all add costs to the point that without new technology, mineral recovery would be uneconomic. Research in the basic program that addressed problems posed by the extraction from Alaskan resources includes characterization, mining technology for deep placers, and bioextraction. Environmental protection is addressed in all phases of this effort. However, specific studies are planned to eliminate or reclaim waste disposal areas and to obtain data on long-term migration of contaminants.

These efforts will provide the scientific basis for technology to stimulate private sector development of Alaskan mineral resources and mineral data and economic analyses on which to base land-use decisions, leading to positive impacts on the Alaskan economy in the form of more jobs, increased revenues, and infrastructure development and on the Nation's supply of several strategic and critical mineral commodities.

MANDATORY COST INCREASES

The Bureau requested what was expected to be a one-time cost of $3 million in fiscal year 1989 as a result of a Superfund-related settlement negotiated with the Robinson Brick Company (ROBCO) of Denver, Colorado to reimburse the EPA for cleaning up radioactive wastes generated 70 years ago by activities of the Bureau of Mines, under an agreement with the National Radium Institute, a now-defunct private organization, on the Robinson site. The EPA has begun work to clean up this site, and has found that contaminants have percolated through the soils, thereby producing much larger quantities of contaminated material than had been originally estimated. EPA's estimated costs for cleaning up the site, not including final disposal of the contaminated materials, have reached $13.5 million. Additional excavations and costs are anticipated. An increase of $7.5 million is therefore required in fiscal year 1990 if the Bureau is to honor its commitment to provide funding for these efforts.

Mr. Chairman, that concludes my prepared statement. I shall be happy to respond to any questions that you or your committee may have.

SUMMARIZED OPENING STATEMENT

Mr. ARY. Thank you, Mr. Chairman. I have with me, Jim Donahue, who is the Budget Officer of the Bureau, and the Associate Directors are also here.

If it is all right with you, the statement as submitted is fine with me. I would just like to quickly summarize a little bit about the Bureau.

The budget this time is a $141 million budget, and is about $15 million more than the President's fiscal year 1989 budget. I think it reflects a reestablishment of the credibility of the Bureau within the Department of the Interior. We have had a reorganization. The reorganization is working well, and it is reporting fine. We are not having conflicts within the research side. It is all coming through one side.

The Bureau has not changed its position relative to what it does. We still have the main parts of the Bureau, the research side, which is health and safety and mining research, and we also continue with our information and analysis program, which is probably the world's premier mineral intelligence organization.

This year and the next year, we plan to have some new initiatives, and a major one fits in with what you have been hearing this morning. We have a new education program that is within our technology transfer program. We have started doing more work on getting our material out, and we are trying to continue that. We are working on advanced materials. We are doing new work on regulatory issues, on waste management and recovery of materials out of waste. We are doing innovative mining, robotics and automation and mineral land assessment. A lot of our research is difficult to separate whether it is on health or safety or whether it is on productivity or whether it is on increased efficiency.

We have several items in our budget that are special this year. One is our headquarters move. Our Columbia Plaza headquarters location has been condemned, and we will be moving out of that location in July 1990. The mission of the Bureau is such that we need to be in the immediate downtown or in the central district area, so that we have ready access to the State Department, the Commerce Department, and the other agencies, as well as being close to Congress.

We have another item that is new. It's not new, it's old, but it's new to me, and that is the phasing out of our helium program. We made a recommendation that we phase this out. Our Government customers would be phased out to the private sector, as they are able to develop capacity and availability of helium. We will make some sales from the helium reservoir, we will maintain ownership of the reservoir, the necessary people and the equipment to maintain the integrity of it, and we will maintain the operation of the pipeline for delivery of helium up and down the line to the customers. We are going to try to encourage additional conservation of helium gas and try to encourage industry to locate and construct another reservoir, so that we can be a little more flexible.

Since last year, we have opened up a Mineral Information Office on the first floor of the main Interior Department building in conjunction with the U.S. Geological Survey. It is another one of our joint efforts with the Geological Survey. Of course, we welcome everybody to come down. We maintain a full set of books and publications that we and the Survey produce. There is also a sales office.

With that short introduction, I would be glad to answer any questions.

REESTABLISHMENT OF BUREAU CREDIBILITY

Chairman BYRD. You said that the Bureau has reestablished its credibility.

What do you mean by that?

Mr. ARY. Well, I had the feeling when I came aboard that, in looking at the graph on FTE's and on the budget, that there had been a constant downhill plunge. It seemed that for the last 8 or 10 years, and specifically in the last few years, we have seen a leveling of the budget and also an increase in the budget. We have worked in the department for programs that we feel are necessary and are the right things to do. And this year, I notice that some people were surprised that we were able to maintain some of our positions. And it is a little bit more than what the President had requested, and I think that based upon a couple of things, we have some special items we have to take care of, but also I think our programs have been proving out pretty well.

BUDGET PROPOSALS

Chairman BYRD. The budget request does appear to be better than many submitted by the administration in recent years, but I note that a significant portion of the request has little to do with the basic research and development and information gathering responsibilities of the Bureau.

For example, when one deducts the $10.5 million in the request for the Robco settlement and the increased funds requested for automatic data processing, $2.4 million, the remaining funds requested for the Bureau do not suggest quite as rosy a picture.

Perhaps you would like to comment at that point.

Mr. ARY. Well, I think that although the money was necessary and mandatory that we put it in, I understand in years past that the Bureau has had to eat some of that out of the programs. I think that we have indicated that our program is important enough that we were convincing enough that they did not make us utilize program money for that.

COAL MINING FATALITIES AND INJURIES

Chairman BYRD. At a time when America is demanding more and more from its minerals resources and more and more from its miners, what is the rationale for the sharp reductions in essential research for health and safety, how can we ask our coal miners, for example, to go deeper and deeper underground and to thinner and more dangerous seams, when our Government proposes to spend less on the very research intended to protect their lives?

Mr. ARY. I think that in the past 5 to 8 years, that our programs have been successful in reducing those fatalities and reducing those injuries, and as a result, a lot of the accident reduction that is left to achieve is going to be on the part of the attitude of the operator as well as further research on our part, but I think that we have shown that we have been able to move the fatalities downward. I think that we have shown that we are able to handle respiratory dust problems; maybe 84, 85 percent of our operations will now meet the specs on coal dust. We are also finding that we are not doing well on silica dust; that, we have found, is an increased problem, but I think that we are continuing efforts there. We have had to make some hard choices on where to put the money, and we have some very fine programs. It is a judgment call. We don't think that one type of safety or one type of program is any better than another—we think they are all good. We just have to make our best call and work with the available funds.

Chairman **Byrd**. What does your fatality record as far as the coal mines are concerned?

Mr. **Ary**. I think that over the last 5 to 7 years, we have gone from a fatality rate of 130 or so down to a fatality rate of 26 to 30, in that range, and we have sort of leveled off at that point.

Chairman **Byrd**. We don't want to level off at that point.

Mr. **Ary**. No; I agree with you, and as I said, I don't think that we can say that what we've done is good until we are perfect. We aren't at that point yet, but we are still working at it. I think that our big problem now is not so much new resources as it is getting the technology transfer out there and convincing the miners and the companies and the operators that they should utilize the information and the ideas for the programs that they have. We think we are seeing a leveling off as really a lack of our pushing. Sometimes you can lead that horse to the water trough, but that be as far as it goes. And we want to go that step farther and make him take that drink, and we think that will come.

Chairman **Byrd**. Submit the statistics for the record, going back over the past 10 years as to fatalities and injuries in the coal mines. Can you do that?

Mr. **Ary**. Yes; we will.

Chairman **Byrd**. And also give the subcommittee a breakdown of the States in this regard.

[The information follows:]

COAL MINING FATALITY RECORD

State	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988[1]
Alabama	10	3	4	6	2	4	4	3	2	1
Alaska										
Arizona				1	1			1		1
Colorado	1	2	21	3	1	2		2	2	1
Georgia										
Illinois	6	15		7	4	5	2	8	1	1
Indiana	2	3	1			4			1	
Iowa						1				
Kansas										
Kentucky	36	29	41	46	14	39	18	16	30	9
Maryland	2					1				
Missouri			2		1					
Montana									2	
New Mexico	1	1					1	3		
North Dakota								1		

COAL MINING FATALITY RECORD—Continued

State	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 [1]
Ohio	3	8	3	2	2	3		3	2	1
Oklahoma	2							1		
Pennsylvania	14	17	16	3	13	8	13	10	6	1
Tennessee	5	4	15	1	3	1	1	2	3	2
Texas	1						2	3		1
Utah	6		3	10	3	29	2	3		3
Virginia	17	15	17	19	13	13	8	12	3	5
Washington								1		
West Virginia	36	34	27	22	13	16	16	18	11	9
Wyoming	2	2	3	2						
Total	144	133	153	122	70	126	67	87	63	35

[1] January–September 1988.

COAL MINING INJURY RECORD

State	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 [1]
Alabama	977	953	616	764	647	707	577	1,167	714	566
Alaska	24	8	15	17	13	15	5	6	4	4
Arizona	24	11	17	26	25	27	36	21	20	16
Arkansas	5	1	11	6	1	2		5		1
Colorado	455	536	642	356	223	259	270	257	210	221
Georgia					1					
Illinois	1,999	1,653	1,469	1,501	1,243	1,173	1,585	1,273	2,018	1,592
Indiana	315	191	147	173	185	255	245	179	246	171
Iowa	2	3	5	1	7	18	5	10	31	10
Kansas	20	23	10	15	4	4	4	4	2	
Kentucky	2,941	2,577	2,419	2,365	1,693	1,761	1,674	1,893	3,307	2,192
Louisiana							2	3	6	5
Maryland	45	43	92	65	31	37	28	15	92	171
Missouri	106	59	47	61	33	57	47	65	64	43
Montana	69	116	67	42	35	42	46	34	40	52
New Mexico	64	53	120	56	44	57	88	71	133	87
North Dakota	49	52	31	33	13	27	43	34	49	36
Ohio	1,856	1,687	1,348	1,158	511	529	685	499	787	565
Oklahoma	80	55	58	36	30	18	21	29	65	41
Pennsylvania	4,875	3,928	2,866	2,713	1,751	1,855	1,458	1,554	2,768	2,210
Tennessee	217	189	174	196	83	65	67	69	224	152
Texas	90	183	160	79	128	113	111	267	304	205
Utah	479	697	620	752	313	242	351	281	293	250
Virginia	1,802	2,209	1,684	1,400	987	996	809	905	1,510	1,415
Washington	68	33	35	56	41	35	32	67	79	55
West Virginia	7,199	6,148	4,959	4,561	2,807	2,672	2,036	2,118	4,445	3,259
Wyoming	321	392	316	180	112	158	166	146	206	146
Total	24,082	21,800	17,928	16,612	10,961	11,124	10,391	10,972	17,617	13,465

[1] January–September 1988.

RESEARCH BUDGET REQUEST

Chairman Byrd. I note that the request for health, safety and mining technology research has been reduced by $13.9 million, a reduction of 27 percent compared with the appropriation for fiscal year 1989, and within this research area, funds for occupational health are proposed to be cut in half.

Similarly, the research request for environmental technology is reduced by $4.4 million or 30 percent, compared to the appropriation for the current year. In addition, the administration proposes to eliminate the funding for the Mineral Institute Program all together.

So there are a number of areas where this budget has turned it back on the American miner and on our ability to mine our domestic minerals more productively and more competitively on the world market and on the mining environment itself.

I don't know what the Bush budget will do by way of modification of the Reagan budget, but as chairman of the subcommittee, I intend to do what I can to support safer and more productive mining.

West Virginia, by the way, is the seventh ranked State in terms of mining activity and for the benefit of the Nation as a whole, and in the production of coal, I believe it is third, most recently.

So it is a fundamental responsibility of the Bureau of Mines to undertake research, to develop the techniques necessary to produce more healthful and safer working conditions for miners and to develop the innovative technology required for cleaner and more efficient mineral recovery.

How will the Bureau be able to meet its responsibility with a funding level that is 27 percent below the fiscal year 1989 enacted level for health, safety and mining technology activities?

Mr. ARY. I think as I mentioned earlier, it is difficult sometimes to separate the amount of money that is shown for health and safety and the amount of money that is shown for new initiatives such as new mining methods and new procedures. In our automation and robotics program, the whole idea is to get the miner away from the face in order to improve the chances of his not being injured and making it a safer working place. In some of the high-wall activity that we have, we have actually developed sensors in order to move the mining equipment underground without a man being with it.

These types of things are shown as new initiatives and are, in part, a redistribution of some of those funds. I think we could go back and make a call on how much of that is safety and how much of it is new equipment, but it would be a very difficult thing. It would really be just a number-crunching game, because the work that we are doing on the new innovative mining methods is almost as much from the safety side and the health side as it is from a productive point.

PROOF-OF-CONCEPT TESTING

Chairman BYRD. The Bureau's fiscal year 1990 request would eliminate funding for the proof-of-concept testing for underground coal mining systems. The budget justification states that these technologies have grown to the point where further development is more properly conducted in the private sector.

What evidence do you have that the private sector will continue evaluation and refinement of these technologies?

Mr. ARY. First, let me say that it is my understanding that the administration's position is that we would not fund demonstration units. With respect to whether or not industry will come in, we do have cost-sharing programs equivalent to about 15 percent of our effort in programs of this type. In West Virginia alone, we have a program where we have 14 agreements where the Bureau funding is about $2.2 million and the cost-sharing program is about $5.5 million. So we are attracting about 2 to 1 with our programs.

And you know, there's also a profit side in this. If the industry will come into these things and take on some of the programs like the self-rescuer, it is going to be a money-making venture for them, if they get into it at an early stage. And they are coming into it at those stages, so I think the incentive is there for the industry to move ahead and to take on some of the proof-of-concept work. The same way with some of the mining equipment that we are working on, where we actually have sensors mounted and we have men standing back with remote equipment to operate the mining machines without being in and around the face.

HEALTH, SAFETY, AND MINING TECHNOLOGY REDUCTION

Chairman BYRD. How will the Bureau's proposed reduction for the Health, Safety and Mining Technology activities affect the Bureau's $1,950,000 memorandum of agreement with Coaltex, Inc., regarding research being done in West Virginia on the guidance of coal extraction equipment?

Mr. ARY. This is one of the cost-sharing items that we have an agreement on, and to my knowledge, it is not going to affect it in any way

Chairman BYRD. What is the ratio of cost sharing?

Mr. ARY. I think it is 2.2 Bureau money and 5.5 corporate money.

Chairman BYRD. Isn't this research important for developing techniques necessary a safer distance from the face?

Mr. ARY. It certainly is. That is why we are doing it, and the further away from the face you get, the safer it is. A safe mine, to me, is one where you don't have anybody underground in unsafe positions.

Chairman BYRD. Well, why are we reducing then? Why the proposed reduction on the technology activity?

Mr. ARY. I think that we are getting our projects to the point where industry is interested in them and industry is putting the money in them, and we don't have to fund it all the way. We could not get interest from the industry if we just had strictly long-term, high-risk type projects. I think now that we have been able to reduce a little and move some of the money into the new programs by having industry come in and take part of that slack. I think it is a matter of classification of the moneys.

Chairman BYRD. A little while ago, you referred to the fatalities as having leveled off, and then later you said that they needed to be continued to drop down—be brought down to the point of perfection, if that could ever be reached. But then how do you square that situation and that statement with the proposed reduction for the technology activity?

Mr. ARY. If we can get the man away from the face, more men away from the face by automation, then we will start reducing fatalities further, because we will have less and less opportunity for the individual to become involved in accidents. That is the reason for the movement of some of the money out of what we are calling health and safety over into the innovative mining methods. That is where that role is.

AUTOMATION AND ROBOTICS RESEARCH

Chairman BYRD. Well, then why is there is a reduction in the funding for automation and robotics research for underground coal mines?

Mr. ARY. Here again, the industry is coming in and funding part of those programs that we were funding all the way. We have carried the program now to a point where industry is interested in coming in and supplying part of those funds.

ROLE OF INDUSTRY AND FEDERAL GOVERNMENT

Chairman BYRD. Well, if the fatalities have apparently leveled off and are not continuing downward, why are we depending upon industry participating? Shouldn't we continue to put the emphasis on the Federal input to encourage more industry participation and to stop that downward trend of fatalities from leveling off, keep it going down?

Mr. ARY. We are doing that, and it is a job and a responsibility of industry as much or even more so than it is for the Federal Government to take the whole role. We are providing a lot of the ideas and a lot of the initial programming, and industry has the responsibility to come in and do it, and industry is responding.

Chairman BYRD. How do you allocate the responsibility as between industry and the Federal Government? Industry has a greater responsibility. How do you allocate that?

Mr. ARY. It is very difficult, but the industry is the user of our ideas and our technology, and we can only lead them up to a certain point. We can take the research up to a certain point, and then industry has to come in and do the development work and the practical application. We are not going into the demonstration side, and as a result, we feel at some point when we take out a lot of the risk and industry can see where it is going to be a winner, it is their time to step in, and they are.

Chairman BYRD. But how do you know when to stop? How do you know when to reduce these funds? How do you know when industry has reached its maximum?

Mr. ARY. You don't know until you get out there and you try to get the industry to take over a project. Industry has been in real bad shape the last few years, and they were not in the game at all, and we are starting to see them come back. But you never stop when you are talking about fatalities and accidents. Everybody has to still play the game. Industry has to take up part of the share. Whatever that is. And they are. And what we are doing is, we are going out and saying, we have this and that and we have developed and are trying to get people interested in it. Sometimes it is difficult, because it is just a little bit before they are willing to put their risk money in it, but when they find that it is going to be successful, and it can be successful with some of their input, maybe they have a new idea that we weren't thinking about. They will modify it a little, and they will take it and run with it. We have very good luck with that. We are not having difficulty in working with industry on this.

Chairman **Byrd**. Exactly what is the Bureau proposing to reduce and why in connection with automation and robotics research for underground coal mines?

Mr. **Ary**. I think we are slowing up on the real basic research side, because we have some projects that are at the stage where they really need further development, and we are not prepared to do that. We think this is the role of the people that are going to utilize it. We are initiating new programs to take the place of those, so we have a long pipeline of projects coming, and a few of them materialize, not all of them. But I don't think that we are cutting back—we may be cutting back in a specific category, but in the overall research category for safety and health, we are continuing to do our work. It may be in the area of equipment rather than health and safety.

Chairman **Byrd**. Provide for the record a list of all automation and robotics research projects for fiscal year 1988 and proposed for fiscal year 1989-90.

[The information follows:]

AUTOMATION AND ROBOTICS PROJECTS

[In thousands of dollars]

Title	Fiscal year—			
	1987	1988	1989	1990 [1]
Adaptive learning networks	250,000	407,000	400,000	400,000
Advanced sensors and control techniques	364,000	408,000	670,000	670,000
Automatic steering system for longwall			200,000	200,000
Autonomous navigation in mining	477,000	676,000	700,000	700,000
Coal interface detector	500,000	570,000	600,000	600,000
Equipment diagnostics	250,000	407,000	400,000	400,000
Face ventilation for automated mining			250,000	250,000
Flexible automation—West Virginia University		338,000	100,000	100,000
Fundamental investigation of robotics	790,000	866,000	875,000	875,000
Haulage systems for autonomous mining			300,000	300,000
Improved retreat mining support system	183,000	270,000	300,000	300,000
Machine control—National Bureau of Standards		216,000	200,000	200,000
Radar coal thickness sensor			275,000	275,000
Sensing and control—Carnegie Mellon University	314,000	246,000	200,000	200,000
Total	3,128,000	4,404,000	5,470,000	5,470,000

[1] Proposed.

BUDGET PROPOSAL

Chairman **Byrd**. Well, I will have some more questions. Senator McClure.

Senator **McClure**. Thank you, Mr. Chairman.

T, I'm glad to see you before this committee testifying in behalf of a budget. I think this is your first chance to testify before this subcommittee. I hope you are here next year to testify again.

Mr. **Ary**. Thank you.

Senator **McClure**. In case the administration hadn't heard that recommendation. [Laughter.]

The administration's fiscal year 1990 request for the Bureau of Mines is $141,197,000. While this is well below the fiscal year 1989 enacted level of $159,292,000, it is much larger than some of the other recent requests from the administration. The chairman has already gone into the Robco settlement and the purchase of a new computer and the money that is necessary to move the headquarters.

Has there been a change in the thinking at OMB that mining is of a higher priority, or are these simply mandatory items that need to be funded?

Mr. Ary. Well, they are mandatory items that need to be funded, and we have had, I think, pretty good luck in working with OMB on our programs. I know I have had several conversations, some better than others. We have been able to sell some of our new ideas to OMB, such as the land assessment and things like that, that they thought enough of our program to send somebody out West for the first time to take a look and see what we were doing. When I got their passback, I wasn't all that thrilled with it, but I do think that here again—I don't know how you establish credibility with them. We are certainly going to try to show them that we aren't throwing any of this money away. So I think that we will have better luck with them as we go.

BASE ADJUSTMENTS

Senator McClure. On pages 22 and 23 of your justification, there are a variety of base adjustments. These essentially identify uncontrollable cost increases and reductions for the next fiscal year. For fiscal year 1990, the Bureau adjustments to the base are an additional $1,792,000.

Is that amount accurate?

Mr. Ary. I think it is.

Senator McClure. Does your fiscal year 1990 budget provide for these increases or are you forced to assume these?

Mr. Ary. It is hard to tell you. I thought that we were providing for them, but I understand that we have absorbed those.

MINERALS AVAILABILITY

Senator McClure. You have requested an additional $63,000. That is 1 percent in fiscal year 1990 for the Minerals Availability Program to analyze the pressing problems of materials disposal. That is on page 63.

The justification indicates that this effort will include specific waste site characterizations, cost of alternative disposal options and recoverability comparisons of alternative materials.

I certainly agree with you and your analysis that materials disposal is a pressing problem, but I do not feel that a 1-percent increase in the program assesses the need accurately.

Do you really feel a 1-percent increase addresses the needs of this problem?

Mr. Ary. No; and since the publication, we have reviewed some of this, and we are adding additional moneys. I understand there is $140,000 more going into that, it's already in the base. I am at a disadvantage here, in that I don't understand the difference between the base and the budget I am talking about today, so I am learning fast on this. So the $63,000 is not a number that you would hold out as something really great on the things that we want to do there.

Senator **McClure**. Could you provide, if you don't have it readily available, information on what you intend to produce with the additional money?

Mr. **Ary**. Yes.

[The information follows:]

Minerals Availability

Funds to cover part of this project are included in the base Bureau budget for fiscal year 1990. They have been provided by deferring planned studies, specifically commodity issue analysis studies.

A pilot analysis to explore ways of quantifying the weight/volume and dispersion of metal, mineral, paper, and plastic constituents will be conducted on one or two waste sites in fiscal year 1990. As minerals availability has long done on mineral deposits, "resources" characterization provides the basis for an evaluation of the costs of recovering (recycling) one or several products from waste dumps. Such estimates provide the essential baseline for judging the value of separating and diverting certain materials from landfill disposals.

LAND ASSESSMENTS

Senator **McClure**. In fiscal year 1989, Congress provided the Geological Survey with an additional $1.5 million to carry out mineral resources investigations of roadless and RARE II lands. This program should be in conjunction and coordinated with the Bureau of Mines.

Your fiscal year 1990 budget request for Land Assessments is $1.2 million below the fiscal year 1989 level and indicates that the mineral resources studies which began in fiscal year 1989 will not be continued in fiscal year 1990.

Does this decrease indicate that you are walking away from the three agency work plan developed last November?

Mr. **Ary**. No; yes and no. Moneys were budgeted for that item, and through the course of the reduction, with the deficit and everything else, the Department and OMB, we came up with no funds for that. I think this is something we are going to have to revisit, because we already have money that has been in there for 1 year, and there is no reason to go out and do that work, if you aren't going to go out and follow up on it. This is a very important part of the program.

Senator **McClure**. Well, what will happen to that work plan? Will it just be abandoned, or will someone else pick up your part of the work?

Mr. **Ary**. No; I think—we are going to try to find out if there isn't some way we can pick up our own part. Nobody else is going to pick that up.

Senator **McClure**. Yes; so if you don't find it, the work plan will not be accomplished.

Mr. **Ary**. It will be put off, and we will have to do it the following year.

Senator **McClure**. If I understand what you are saying, and I hope I do, it sounds to me that in the passback from OMB, you lost the funding for this program.

Mr. **Ary**. That's right.

Senator **McClure**. And you haven't yet found another way to do it. The reason I ask is that I am trying to find out what your feeling is about the value or the necessity of doing this RARE II work.

Mr. **Ary**. Well, I testified before your committee before I came with the Government, and I think you are aware that I have a very strong feeling for this type work. I do not feel that the land managers and the decisionmakers should be doing things that are going to lock up land and withdraw land before it has been evaluated, and so I have a very strong feel for the land evaluation and mineral land assessment. I think that we could spend a lot more time and effort on this. I think that you will find that I will be spending more time with the Bureau people on this than maybe what they have had in the past. I am a developer. I am an explorationist, I am a multiple use concept person, and I would like to see that land evaluated before it gets locked up.

POTENTIAL SUPPLY OF MINERALS

Senator **McClure**. In fiscal year 1990, the Bureau proposed to continue funding the ongoing work with the objective of estimating the potential supply of minerals from undiscovered as well as discovered deposits in the States of Nevada and Idaho. As I understand this work, it is the inventory of known deposits, while the work on RARE II lands is the identification of resources. Is that correct?

Mr. **Ary**. Yes; it is.

Senator **McClure**. Why does the inventory of resources have a higher priority than the identification of resources?

Mr. **Ary**. I think it was probably the person that wrote that particular part of our budget, and I don't think it reflects my position, because you have to have both, and I don't think that one is any more important than the other, because you have to know the value of the material that you already have and the areas in which they are located in order to know which way to go for the new prospects.

Senator **McClure**. Well, of course, I agree with what you are saying, and I would like to indicate that. Will you be able to spend the money if we add it back?

Mr. **Ary**. Yes; let me say though that if you add it back, I can use it in mineral land assessment the way I want to?

Senator **McClure**. Well, I don't know. [Laughter.]

We'll talk about that.

Mr. **Ary**. OK. Because what I am saying is that we will utilize the money, and it will be utilized properly. I don't want my management responsibility taken away from me and making me do something that really is not part of the overall assessment program.

Senator **McClure**. Well, I certainly understand that, and I will be pleased to work with you to try to answer those questions; sometimes, however, your judgment and mine might be closer together than your judgment and OMB's.

Mr. **Ary**. You know, I wouldn't be at all surprised if that's not correct. [Laughter.]

You might talk to Mr. Craig about his question and answer session last week.

GROUND CONTROL PROGRAM

Senator McClure. Let me touch on one other issue very briefly. The ground control program has requested a decrease of $1.5 million for fiscal year 1990. Now the adjustment indicates that the additional funds added in fiscal year 1989 for the purchase of rock burst monitoring equipment have been used and new funds are not necessary in fiscal year 1990. If the equipment has been purchased, why isn't there a corresponding downward adjustment to the fiscal year 1990 base?

Mr. Ary. I have talked to our budget people about this, and this is one of the areas I have difficulty coming from industry to Government. Those are two separate items, and I think they are meant to be two items in the budget. One is the money that was for capital equipment and the other is for program money. The program money is in the base and is there, and so we just don't need to purchase any new equipment.

Senator McClure. You think it is just the difference between the capital outlays in the 2 years?

Mr. Ary. In the program. And it will not—because we don't need new equipment, it doesn't mean that you are going to have a drop off of the program, because the equipment is now being installed and is being utilized. The money is there for the people to do the work.

Senator McClure. I wonder if you could outline for us in the submission exactly where that money is and how it will be utilized.

Mr. Ary. Sure.

[The information follows:]

Ground Control

The additional $1.5 million appropriated by the Congress for the Ground Control program during fiscal year 1989, was allocated as follows:

$300,000 to advance rock burst detection methods and to continue monitoring activities under a cooperative agreement at the Galena Mine, Idaho. Expenditures for purchasing capital equipment during fiscal year 1989 will amount to $365,000 during fiscal year 1989, bringing the total for Bureau equipment purchases to be used for the monitoring effort at the Galena Mine to more than $665,000. All activities under this research area are conducted at the Denver Research Center.

$450,000 for rock mass characterization studies and rock modification methods to control rock bursts. This work is conducted at the Denver and Spokane Research Centers.

$750,000 to investigate coal mine bump phenomena, to research predictive techniques, and to devise methods that will lessen or control coal bump frequency and severity. Coal bump research activities are conducted at the Pittsburgh, Denver, and Spokane Research Centers.

ROCK BURST REDUCTION

Senator McClure. Does the Bureau have a goal to reduce rock bursts by the year 2000, similar to the goal for dust exposure?

Mr. Ary. I have a little difficulty with that question, in what the answer is in one respect, in that you don't reduce rock burst in a short period of time. What our rock burst program is, is to try to study mining designs, mine designs which will not allow the stress to build up. We are trying to reduce the injuries caused by rock bursts between now and 2000. If a mine is on the drawing boards, then we can't have input into that design. So it is going to be a longer term on the mine design, although with the success we are having with the Lucky Friday mine in the field, it is not going to be long before they are going to be coming in and saying, let's talk about that design and maybe hold off on some of the programs they want to do now and look at these new designs.

We do plan to continue to reduce rock burst, if possible, but our new mines are going to be deeper, which means we are going to have more rock bursts, but we are going to reduce injuries within them, because we are now determining—we know a little bit more on the predictive side, when the rock bursts are going to happen, and we will remove the men from that area when the burst happens. With the new mine designs, we will probably have better success on rock burst.

Senator McClure. Would you provide for the record what you believe to have been the advances, statistically, with respect to predictive results, please.

[The information follows:]

Rock Burst Prediction

Bureau of Mines rock burst research is aimed at protecting miners through the rapid and timely prediction of impending rock burst occurrences, and the stabilization of ground conditions by improvements in mine design and planning. Bureau rock burst research has significantly advanced methods and techniques to detect and analyze mining induced stresses, and has developed new mining methods to control or eliminate the severity of rock bursts. Microseismic detection and analysis technology developed by the Bureau and incorporated into a mine-wide monitoring system at a hard rock mine in Idaho has proven successful in providing information that led to the evacuation of the miners prior to rock bursts. Major bursts occurred about 60 percent of the time following evacuation. Because of the complexity of the problem, the Bureau is continuously improving the technology to more accurately predict and control rock bursts.

MINERAL INSTITUTES

Senator McClure. I would be remiss if I didn't bring up the Mineral Institutes during the hearing. At last year's hearing the Acting Director indicated that the Institutes really aren't that bad; however, the budgetary climate wouldn't allow the Bureau to request funding in fiscal year 1989, and as you know, Congress didn't agree with that assessment. And the fiscal year 1990 budget doesn't request funds either.

Do you agree with your predecessor that they are not all that bad?

Mr. Ary. Yes; during my confirmation hearings I said the same thing. I feel they are good. I worked with them on the outside. But here again, it is a budget matter. They were submitted.

Senator McClure. You did request the Institutes?

Mr. Ary. The budgets for the Institutes were there, and they didn't make the cut, and we are now in the process of reviewing the Institutes overall. The advisory committees have come in with recommendations on reviewing every one of them between now and 1992, and we are going forward with it. We did not recompete all of the Institutes as was requested by you last year, because the advisory committee thought that the best thing to do is review them and get them in line, so we can have a way to look at them. I am a fan of the Institutes.

HEADQUARTERS RELOCATION

Senator McClure. You and I have had a number of discussions about the headquarters move, and I will not burden the time of the committee today, except to again express my interest that that go forward as we discussed, and I hope that things are on track.

Mr. Ary. We have assurance that the GSA is going to go out for an advertisement. We have a little difference of opinion as to how they are to do it. I understand that when people go out for relocation, they suggest an area that they would like. We feel strongly that we have to be available to Congress, to the State Department, people that we work with closely, and in the program that we submitted to GSA, we gave them an outline. They have enlarged it a little, and now they want to enlarge it all the way, District-wide, so we do have a glitch there that we are trying to work with them to get the desired result.

Senator McClure. You remember the discussion that led to the decision not to move the Bureau to Avondale, and at the same time, the other side of the discussion said, "And they won't go to Virginia either."

Mr. Ary. I remember.

Senator McClure. I am sure you do. There is nothing changed in either of those respects?

Mr. Ary. No.

Senator McClure. I will be pleased to continue to work with you on that, because I think it is important that you get a suitable location to carry out the objectives of the Bureau. It is uniquely interactive with a variety of different agencies, as you point out, and I think it is important therefore, that it be in a position where you can do that.

Mr. Ary. We appreciate your effort on this, and I just hope that you don't think we are wearing out our welcome, if we come to you on these things. We like to do them ourselves without getting people involved, but we appreciate the effort.

Senator McClure. Surely. You are not going to wear out your welcome, I assure you.

HELIUM FUND

On the helium fund, I will submit a number of questions for the record. One of the things that I don't find in the justification or the materials is what I had understood the program to be originally. It wasn't just to meet Government needs in the future, it was to meet society's needs as well as Government's needs, and it was to conserve a wasting asset. As you and I know, the helium that was being wasted in the atmosphere at the time and continues to be wasted is from a very uniquely rich stream of natural gases. It is not just a resource that comes from anywhere. It comes in specific forms at specific bases. And the one place that we were most concerned about was the extremely rich source. It was felt by many then that rather than waste it in the atmosphere and have to recover it from other sources in the future, it made some sense to conserve it, so that it would be available for society's uses in the future.

Now I know what the cost analyses run on that and the length of time it would take to be used which indicates that it would be cheaper to get it somewhere else in the future; thus, the "go ahead and waste it now" school of thought. And it may be that all the controversy over that program over the last 15 years or so has brought us to the point where there is no reasonable alternative but to take the steps that are being suggested. I take this time only to say that I plan to look into that a little more carefully than I can do at this particular time, because I am not at all convinced in my own mind that we are making a wise decision with respect to the conservation of a relatively unique and finite resource. Once that helium goes to the atmosphere, getting it back is prohibitive.

We have a number of applications that we may well get into in the future, even though perhaps the new breakthroughs in superconductivity may reduce the apparent demand for helium—one of the questions I would like to look into.

But cryogenics are coming sciences. Certainly, the long distance transmission of electrical energy through superconducting transmission conduits, whether they are lines or otherwise, is something that we will apply at some point in some portions of our electric transmission. We certainly will do that as we look at the distribution of electrical energy, points of generation, and particular points of air pollution problems in nonattainment areas. A number of things, as well as the more efficient utilization of electrical energy, may lead us to more and more rather than less and less of a demand for helium.

I recognize that the new breakthroughs in superconductivity have everybody so excited. Perhaps we are rewriting the book; however, I also remember when nuclear power was going to make electricity so cheap that you couldn't afford to meter it and bill it.

Mr. ARY. To set you at a little bit of ease, Senator McClure, the writeup that you have on it went through the same type of distribution and editing as everything else does, and in the first draft that I prepared, there were some comments about the conservation program and what it was for, and the proposal that had been made is also a proposal—there is a section there that will encourage continued conservation—I have not made the recommendation that we sell off the reserves in Cliffside. Bidding of crude helium would be maybe on a one-time basis, when the Government customers are absorbed by industry, because right now there is not enough crude helium available to do that without utilizing the reservoir.

Exxon is opening up at Riley Ridge. If the market is there, they have the capability of going forward with it. Mobil may open up there also. And so we may have additional people entering the market, that is if the Government allows the price of helium to reach its natural level. These companies may be interested in coming back into the recovery of the helium out of the natural gas. And of course, we have a double purpose for this. We own the helium in most of that natural gas. We don't get it unless somebody leases the oil and gas and recovers the helium. But if they are pumping that gas and they are distributing it, and they are flaring the helium, we ought to be back in there like we did with Exxon and enter into a contract.

Then, if they would find a reservoir area that they could utilize for their cycling in the winter when they need the gas, they can't sell all their helium, they flare. In the summer, they need the helium when they don't have enough gas sales to make up. So if they establish a reservoir, then we could take our royalty, instead of taking it in cash, take it in kind and put it in the reservoir. So then we would be more flexible around the country.

The new source and the new uses of helium may outstrip what we really are thinking about, and if you take a look at those AWAC type of balloons that the Navy is talking about in the New York Times, the size of those, and if they establish those every so many miles around the coast or a perimeter something they want to look at, that is a tremendous amount of helium, or if the supercollider, if they have to purge that more than once a month, we are talking about tremendous amounts of helium. And we do want to protect that reservoir.

Senator McClure. One of the concerns I have had in the past is, that while you can get helium back in the future— if you are willing to pay the cost—you begin then to affect the marginal costs of alternatives that might be undertaken but would have to be abandoned because marginal costs have risen too much. So it isn't cost alone that drives the reason for a conservation program, because that cost might affect derivity of advancements that otherwise we will never be able to undertake.

Mr. Ary. Because it would be just those exotic uses that could afford it.

Senator McClure. I thank you very much, and I will look at that further before making up my mind on what we ought to do about this program. Thank you.

Mr. Ary. Thank you.

Senator McClure. Thank you. Mr. Chairman.

OCCUPATIONAL HEALTH PROGRAM

Chairman Byrd. Mr. Ary, the Bureau's fiscal year 1990 budget justification states that it is the long-term goal of the Occupational Health Program to develop technology that will allow industry to reduce average dust exposures of miners by 30 percent by the year 2000.

How do you justify the proposed reduction for respirable coal dust control research of $832,000 below the fiscal year 1989 enacted level, in light of this long-term goal?

Mr. Ary. We still feel that we can cause a reduction by 30 percent. We have encountered the silica side of this, which we were not projecting in that, and we are spending more time and effort on the silica side now than what we had before, but I think with the funding that we plan and the funding that we have, we will be able to reach that goal.

Now, you know, 2000 plus or minus, but I do think we can still meet our goal.

Chairman Byrd. Well 2000 plus how much?

Mr. **Ary**. A year. I am not saying 15 years or anything. I am talking about a couple years, maybe. A couple years sooner or a couple years later. It was a target date that we set, and we are still shooting for that target date.

NATIONAL CENTER FOR RESPIRABLE DUST

Chairman **Byrd**. The Bureau proposes to discontinue funding for the National Center for Respirable Dust, which is located at West Virginia University. The National Center for Respirable Dust has become internationally recognized for its leadership in researching causes of respirable dust disease and as the sole source of research of possible treatments to protect against and possibly reverse the effects of this dreadful disease.

I would like to quote in part from a December 20, 1988 letter to the president of West Virginia University from Dr. K. Robock, director of the European Economic Commission, EEC, Dust Research Council. Referring to the work of the National Center, Dr. Robock writes:

> Their work ranks West Virginia University as the leader in the United States with respect to research on pneumoconiosis. It is marvelous to see such good work done on such a limited budget." And he concludes, "Perhaps the quality of their research will merit national or international recognition at some time in the future.

I ask unanimous consent that this letter, as well as another letter of the same date from Dr. Robock to the Director of the Center, be made a part of the record at this point.

[The information follows:]

Letters From Dr. K. Robock, Director, European Economic Commission, Dust Research Council

Dr. Neil S. Bucklew,
President of West Virginia University, Stewart Hall,
West Virginia University, Morgantown, WV.

Dear President Bucklew: I have the pleasure of telling you about the excellent research being done by three of your faculty members.

I have returned from the VIIth International Pneumoconioses Conference held in Pittsburgh, August 23-26 where four of the outstanding papers were given on the work of Professors Meloy and Wallace of WVU's Particle Analysis Center, and Grayson of the Department of Mining Engineering. These four papers, reported on innovations and insights that were at the heart of the conferences main conclusion, namely that the important information on the effects of respirable dust on workers' lungs lies in the characterization of the individual particles and particularly their surfaces. Their work ranks West Virginia University as the leader in the United States with respect to research on pneumoconiosis.

Last year, as head of the German and EEC research effort to understand and solve the respirable dust problems in coal mines, I, and five of my colleagues spent 3 weeks in the USA visiting numerous government, industrial and university laboratories, and found that Meloy, Grayson and Wallace were doing research relevant to our current research program. For this reason, we have selected these three research efforts in the USA, with which to collaborate. It is marvelous to see such good work done on such a limited budget.

I am pleased that these three Professors work together as a defacto research group, and thus I can effect much of the proposed research collaboration through the Particle Analysis Center. We would like to invite these investigators to spend some time at our research laboratory to foster this cooperation. This might include experimental studies which require various analytical equipment not accessible at your University, such as SEM and Image Analysis methods.

In addition to the significant interactions with the Wallace Meloy-Grayson team, I saw Dr. Bajura just before the conference and briefly discussed respirable dust research. I did not have a chance to tell him, following the aforementioned three presentations, how pleased I was with the direction of his ongoing research.

Once more, let me congratulate you on the pneumoconiosis program at your university. Perhaps the quality of their research will merit national or international recognition sometime in the future.

Most sincerely,

DR. K. ROBOCK,
Director.

Prof. RICHARD A. BAJURA,
Director, Energy and Water, Research Center, West Virginia University, Morgantown, WV.

DEAR PROFESSOR BAJURA: It was nice that we were able to meet again the day before the VIIth International Pneumoconiosis Conference in Pittsburgh. Unfortunately, I didn't see you during the conference and thus was unable to discuss with you some of the research results generated through your Generic Mineral Technology Center for Respirable Dust. From the fact that there were over 80 Germans present at the conference, I think you can understand the importance of that conference to us.

It was, I believe, that a major focus of the conference was on characterizing individual dust particles and particularly the surface, or surface chemistry, of these individual particles. We must begin to pay close attention to the way dust particles are treated after capture. Subtle differences in the coating of particles, for example quartz, whether it be from the organic matter in the coal or from the pulmonary surfactants, has a profound effect on the particle's disease potential. Gone are the days of bulk characterization and low temperature ashing. Even crystalline and amorphous silica samples may have weakly or strongly cytotoxic or fibrogenous effects according to their genesis. Besides quartzes with different properties also the other mineral components may either have an attenuating or inhibiting effect on the fibrogenous potential of mine dusts.

Because of the quality, potential and originality of their research, we are interested in (1) Meloy's and his Co-PI's work on particle's shape and its effects on surface behavior, characterizing the importance of the electrical double layer in cytotoxic interactions, and particularly on his more recent work in the development of separating minerals based on subtle variations in surface properties, especially particles from real dust samples, a most important experimental development; (2) their work on particle surface composition and biochemical interaction with surfactants coating the lung as possible early and controllable events in pneumoconiosis; (3) Grayson's work on characterizing individual particles by the SEM and correlating these characteristics to the epidemiology of individual coal seams. It is marvelous to see this fine work done on a limited budget.

After our tour and review of pneumoconiosis research institution, we identified this research for collaboration with our joint EEC program. In this proposed cooperative effort we hope to work directly with the Particle Analysis Center. In our cooperative work we plan to: Exchange dust samples, analyze each other's samples, exchange analytical techniques, exchange information, exchange researchers, if possible and, collaborate, where possible, on joint projects.

In addition, we plan to invite each of them to our laboratories for research: discussions, lectures, seminars, and courses; as well as doing collaborative and joint research using our equipment. This might include experimental studies which require various analytical equipment not accessible at your University, such as a SEM and Image Analyzer.

I think that West Virginia University is most fortunate to have faculty members with such exceptional research capabilities. Sometimes, when you are as close to your investigators as you must be, it is difficult to appreciate them. Besides being innovative, really good researchers push very hard to get the resources they need to do their research.

Finally, let me say once more how much I enjoyed seeing you again, talking with you about our and your work and how much I look forward to working together with the three aforementioned researchers on joint projects.

Most sincerely,

DR. K. ROBOCK,
Director.

RESPIRABLE DUST RESEARCH

Chairman **Byrd**. Now, given the obvious need, how can we afford not to continue to work of the National Center?

Mr. **Ary**. It is a difficult question. We are doing an awfully lot of work outside of the Center, and when you put all of our respirable dust programs together, we feel that there is adequate work being done, and—I think it is $2.5 million that is involved—I think we are doing duplicate work, and we have duplicate activities going on.

Chairman **Byrd**. Where are the duplicate activities going on?

Mr. **Ary**. I think we have some dust research going on in-house at Twin Cities, as well as Penn State and West Virginia Universities.

Chairman **Byrd**. How long has that work been going on at Penn State and Twin Cities?

Mr. **Ary**. I think it's been going on as long as we have had a center, as near as I can gather or before we even had a center. It was part of the dust work at Pittsburgh and other places that we have had. It's always been there.

Jim Donahue just advised me that a lot of the work that we are doing is not the medical work but is in the prevention of the dust in the equipment type of activity. We've got a medical problem, but if we can prevent the dust from being formed—if we can keep the miner out of the dust, then we will not need to put nearly as much on the medical side.

Chairman **Byrd**. How much money is involved?

Mr. **Ary**. I think $2.5 million at the Respirable Dust Center in West Virginia.

Chairman **Byrd**. How long has the center been in operation.

Mr. **Ary**. I think a couple of years, since the early 1980's.

Chairman **Byrd**. Is the work at the Center coordinated with the Bureau?

Mr. **Ary**. Yes; it is.

DUST LEVEL CONCENTRATION

Chairman **Byrd**. Will the remaining dust concentration at 70 percent of the current level continue to represent a hazard to miners?

Mr. **Ary**. Would you repeat that? Any dust is a hazard to a miner.

Chairman **Byrd**. Yes; I understand that. My father was a coal miner back in the days of the carbide light, so you are not talking to a boy in knee britches when it comes to coal mining. And my brother-in-law died of pneumoconiosis, and my brother-in-law's father was killed under a slate fall in the coal mine. So I know a little about them.

Will not the remaining dust concentration of 70 percent of the present level continue to represent a hazard to miners, and how will we protect them from this hazard?

Mr. **Ary**. It is a hazard to the miner, and we will have to continue to find ways to suppress the dust at the face and at the equipment and at the miner's location.

Chairman **Byrd**. How many persons are involved in this National Center for Respirable Dust?

Mr. **Ary**. I don't know. I can supply that for you.

Chairman **Byrd**. Well, you know I am going to try to keep that going. [Laughter.]

Mr. **Ary**. I recognize that.

[The information follows:]

Respirable Dust Generic Center

The total number of persons involved in the Respirable Dust Generic Center varies annually depending on the number of projects funded and students supported. In 1988, the number of university personnel, staff and students, involved in the Generic Minerals Technology Center for Respirable Dust totaled 109. In addition, the Bureau of Mines provides administrative and technical oversight which involves approximately 2 to 3 person-years per annum.

NATIONAL CENTER FOR RESPIRABLE DUST

Mr. **Ary**. I was not being an upstart about my comment on the dust. I recognize and I know of your background, and I too come from the same background as you, only from southern Illinois, and I did not mean to indicate in my answer that you were not aware of what was going on in the mining business.

Chairman **Byrd**. Well, in the light of the very remarkable letter that I am putting in the record and from which I quoted excerpts by Dr. Robock, don't you think it would be a mistake to discontinue funding the National Center, when it is getting that kind of national and international recognition? It must be doing work that justifies the moneys that we put into it.

Mr. **Ary**. I can only say yes, but that I think we should take a good hard look at it and make sure it is one of the items that we consider again.

Chairman **Byrd**. Where was this money eliminated? At the OMB level? This money—was the reduction recommended by the Bureau?

Mr. **Ary**. I think we did—we budgeted for it—when we talk about the Respirable Dust Center in my job, we don't separate them very often from the Mineral Institutes and generic centers. It is just a part of the ongoing program. And it was budgeted for along with the others, but it did not make the cut.

Chairman **Byrd**. Fell through the cracks.

Mr. **Ary**. Fell through the wringer.

Chairman **Byrd**. Senator McClure and I are both partners in this enterprise, and we will be seeing if we can't put something back up through the cracks.

Mr. **Ary**. You know, I hate to see you have to do that, because as I explained at the Department, I felt strongly about the Institutes, and I budgeted for them for a couple reasons. If I budget for them, I have a little more say in where the money goes and what projects they undertake. I have difficulty going out to the Institutes now, because they say that is money my Congressman gave me. What are you doing talking about it? And so I have felt that this is something if we budgeted for, we would have a little better control of the money. We don't have that problem. And there is something else. The advisory committees have done a good job on keeping the problems in line with the mission of the Bureau, and we would just like to be a little closer to them and make sure that maybe we might have a little program they might want to work on rather than something that they want to work on.

Chairman **Byrd**. Well, Mr. Ary, I am sure you feel sincerely that way, and I will do what I can to help to bolster and support your position in this matter. I understand your position.

NATIONAL MINE LAND RECLAMATION CENTER

The Bureau's budget justification states that the latest inventory information on abandoned coal mine land indicates a total of 9,578 high priority problem areas which will cost an estimated $5.8 billion to reclaim. The Bureau's justification states that there is a continuing need to coordinate reclamation research nationwide in the priority areas of acid mine drainage, subsidence, erosion and sediment control, mine fires, groundwater impact, soils reconstruction and revegetation and wetlands reclamation and development.

Why is the Bureau proposing to eliminate the funding for the National Mine Land Reclamation Center in light of the vast number of problems that continue to exist?

The National Mine Land Reclamation Center is a consortium of five universities and is headquartered at West Virginia University.

Mr. **Ary**. Well, here again, I think that we are involved in a budget problem with the reduction of the deficit, and it is a program that we have done a lot of work on, and we have had good luck. Some of the program is being absorbed by industry, because we have taken the projects beyond an idea, and they are being utilized.

As far as the budgeting side of it, it didn't make the cut.

You know, I feel pretty foolish sitting here. It is like taking the fifth amendment sometimes. But this is just—I am trying to defend the budget. And we have tried to separate the ones—when we got the money we said, OK, what is the highest priority, and we've gone down. There are a lot of things that we would like to do, and we will continue to—as long as I am here, continue to scrap to try to get those type of funds.

Chairman **Byrd**. Well, I appreciate the position you are in, Mr. Ary.

Was this item requested at the OMB level by the Bureau?

Mr. **Ary**. Yes; I think it was. With respect to this particular item, we probably have better in-house ability than we would have at the Center. We have some of probably the world's outstanding people in this area, and so our in-house activity would probably exceed the ability of contracting it out, but I am advised that we did not budget for this on the original go-around. This is one we did not budget for.

Chairman **Byrd**. This is one that fell through the cracks at your shop.

Mr. **Ary**. This is one that I have a feeling that we felt we were better at than anybody else, and so why give our money to somebody else to do it?

Chairman **Byrd**. The State and university contributions to the Center exceed 50 percent of the Federal funds. The Federal dollars leverage significant investment from non-Federal sources. The improvement that the Center seeks to make are intended not only to facilitate the reclamation of abandoned mine land acreage more efficiently but to do so at less cost. Presently, the inventory of abandoned mine land reclamation sites has an estimated cleanup cost which exceeds $5.9 billion. That inventory does not contain a complete list of all sites needing reclamation.

Thus the actual remaining reclamation costs would far exceed the estimate for the inventory alone.

Research conducted by the Center can reduce reclamation costs for current mining operations. Requirements of the Surface Mining Act of 1977 and State reclamation requirements can raise the cost of coal produced by as much as $5.50 per ton. More efficient reclamation technologies could save tens of millions of dollars per year for coal users, if an average reduction of only 10 cents per ton of coal mined were achieved.

The National Mine Land Reclamation Center is presently in its infancy.

Appropriations of $1.2 million in fiscal year 1988 and $1.5 million in fiscal year 1989 have enabled the University Consortium to initiate the Center's operations only this past summer. So it is too early to really see what the potential is.

The termination of funding for this Center in the fiscal year 1990 budget would nip in the bud the promise of cheaper and more effective mine land reclamation in the future.

Now you talk about in-house capability being superior. How long has the Bureau had this superior capability? The Bureau's program only goes back 2 years, does it not?

Mr. ARY. I think the Bureau has been involved in mine land reclamation for a long time. Now whether they call it mine land reclamation or what, by a special project name or what have you, but the Bureau has been involved in mine land reclamation since I was a kid. So it is not as if we just started doing this, but we have been working with groups like INEL on biotechnology, and I don't think there is anybody in the world that is as good at that as the combination that we have in there. We have been doing some stuff with wetland reclamation, and I don't think anybody is anywhere near that. Whether that was called mine land reclamation or whether it was called acid mine drainage, I don't know, but it is not a Johnny-come-lately with the Bureau. We have been doing this for sometime in one form or another.We appreciate the chance to come.

Chairman BYRD. Well, you'll have more chances. [Laughter.]

We appreciate your testimony. You're a good witness, and you're trying very sincerely to do what you think is best. We have to differ with you perhaps on one or two of these items, and where we differ, we will just try to prevail. [Laughter.]

Senator McCLURE. Mr. Chairman, I might just mention what sublimally was under the conversation, and that is my own feeling that we are exceptionally fortunate to have a man of T Ary's qualifications and background sitting where he does, and that is an assignment I hope is continued as the selection process goes on downtown. I have communicated that to the people who are staffing the new administration, and I again take the opportunity to say publicly what I have had the opportunity to say privately a number of times.

If you try to look at the staffing manual for the Federal Government, we always look at people that we are trying to get in who have extraordinary qualifications by way of training and experience. I don't know of anyone who can do that job or fills that mandate better than T Ary, and I look forward to having you around to discuss these problems with and work with for sometime.

Mr. ARY. Thank you. I appreciate it. I just hope that you don't think that sometimes I am being an upstart from my comment. I certainly don't mean it that way, and I will—I may have some differences of opinions and sometimes when I see the whole program and there has to be a priority listing and a judgment call made, I will make it. I will try to defend it. But you have a lot of persuasive arguments about your programs.P

Chairman BYRD. Well, I certainly don't—I didn't mean to put you in the category of an upstart, Mr. Ary, when I reacted as I did. I think you made a fine statement and that you are trying to do a good job.

Mr. ARY. Thank you. It's a good group of people to work with.

Chairman BYRD. Just keep your eye on those programs in West Virginia. [Laughter.]

Mr. ARY. The last time you and I were in West Virginia ended up the doctors made more money than the miners did. Did you notice that all those people had their hands cut handling those shovels? I saw three afterward, and they had a name tag on them. As they used the shovel, they cut right in their hands. One of those fellows had 16 stitches in his hand.

Chairman BYRD. Those fellows didn't know how to handle a shovel. [Laughter.]

Mr. ARY. They've never been coal miners; that's the problem. [Laughter.]

Thanks very much.

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. Mr. Ary, I will have additional questions for the record, and other Senators will have likewise, I am sure, and you will provide the responses as promptly as possible.

[The following questions were not asked at the hearing, but were submitted to the Bureau for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Occupational Health

Question: **The Bureau's FY 1990 budget justification states that the number of hearing-loss compensation claims being filed is increasing (pg. 75). Clearly, noise exposure continues to be a major problem, particularly in underground mines. Confronted by what is clearly a growing problem, why is the Bureau proposing to reduce noise control research by $500,000?**

Answer: The Bureau has successfully developed noise control retrofit techniques that may be applied by the mine operator on-site. Demonstrations of retrofit techniques have been performed on personnel carriers, auger-type continuous miners, chain-type conveyor systems, and diesel-powered vehicles including utility vehicles, dozers, front-end loaders, and load-haul-dump machines. These retrofit techniques are now available to the industry and equipment manufacturers for commercialization. As a result, the Bureau's noise control research program has focused its FY 1990 work on developing new concepts to reduce the two greatest noise offenders -- percussive drills and coal extraction equipment, such as drum-type continuous miners and longwall shearers. Since this narrows the current scope, the Bureau has proposed to reduce noise control research by $500,000.

Mine Safety Systems

Question: According to the latest Mine Safety and Health Administration (MSHA) data for the past five years, an average of more than 22,000 nonfatal injuries occurred in coal, metal, and nonmetal mines. The Bureau's budget justification states that each year haulage and machinery-related accidents account for about 20 percent of the total injuries. In view of the fact that these accidents are continuing to occur with an unacceptable frequency, how does the Bureau justify its position that no additional funding is required?

Answer: The Bureau has increased the funding for research efforts devoted to the reduction of haulage and materials handling accidents from about $2.3 million in FY 1988 to nearly $3.0 million in FY 1990. A new Mine Safety Systems program introduced in FY 1989, is placing greater emphasis on the reduction of accidents and injuries associated with haulage and material handling activities. Past Bureau research activities have proven successful in reducing the injuries and fatalities associated with other phases of mining operations. The present health and safety program, along with the mining technology program, is now focusing on improvements to current mining methods and techniques as well as developing safer alternative haulage systems.

Mine Disaster Prevention

Question: The budget request proposes to reduce the Mine Disaster Prevention research program by $2,238,000 in FY 1990 from the FY 1989 enacted level of $6,850,000. The Bureau's budget justification states that recent mine disasters have cost the industry an average of $120 million per year. During the period 1986 through 1987, 80 major fire incidents occurred. Given the obvious need to mitigate the causes of the mine disasters attributable to fires, explosions, and gas outbursts, how does the Bureau justify decreasing the funding for the Mine Disaster Prevention program by 33 percent?

Answer: Bureau research activities covering early fire detection and prevention, as well as gas outbursts, were enhanced with $2.3 million added to the FY 1989 budget by the Congress. Although a 33 percent reduction for FY 1990 will have an impact on the program, its effect will be minimized by focusing on high-priority research efforts that address problems which have the greatest potential for causing disasters. The funds proposed for FY 1990 are adequate to meet this goal. Additionally, intermediate results from other research program areas should have a synergistic effect in mitigating mine disasters. For example, results emanating from research efforts to improve face ventilation for dust control should also serve to also control methane accumulations at the face and to reduce the potential for explosive frictional ignitions. Results generated within the automation and robotic research program should also have a favorable impact on reducing the risks to miners and the potential for mine disasters. The Bureau continually seeks to maximize its research resources without sacrificing health and safety needs through combining efforts that address similar or related hazards and will achieve the same technologic objectives.

Question: What is the status of the development of the belt-wearable self-contained self-rescuer (SCSR)?

Answer: NIOSH/MSHA certification testing of belt-wearable prototype units is scheduled to be completed by April 1989. At that time, 200 production quality units will be used by the Bureau for in mine evaluation. Assuming successful testing and evaluation of the apparatus, the person-wearable self-contained self-rescuer could be commercially available to the mining industry in August or September of 1989.

Question: The Bureau's budget justification states that the development and proof testing of the diesel-discriminating fire sensor will be completed and technology transfer to the private sector will begin in FY 1990. Given the current rate of false alarming, isn't further research to address system performance and the placement of sensors warranted?

Answer: The Bureau expects that the results from the research being conducted in FY 1989 and to be conducted in early FY 1990 will adequately address the current false alarm problem. However, if problems persist, additional resources could be applied to properly address overall system performance, including sensor placement.

Helium Fund

Question: The FY 1990 budget assumes the sale of the helium program assets, but not the helium, for a total value of $12 million. Options to implement the sale are under review within the Administration and will be forthcoming in a separate legislative package. How did the Bureau arrive at the asset valuation of $12 million?

Answer: In Fiscal Year 1988 and 1989, the Administration estimated the asset value at $50 million and $25 million respectively. In March 1988, an outside contractor estimated that the surface facilities and distribution equipment have a salvage value of about $11 to $12 million. The current estimate of $12 million is related to that figure.

Question: Government reserves of crude helium total about 34 million cubic feet (BCF) at Interior's Cliffside, Texas reservoir, which provides over 95 years of supply for the government at the current rate of use. In addition, the government owns the rights to other sources of crude helium at Riley Ridge, Wyoming field, which has an estimated potential of 34 BCF. Under the Administration's proposed sale, what would happen to these reserves?

Answer: Under the proposal, the U.S. Government would retain ownership and control of the Cliffside crude helium reservoir, and conservation pipeline, those facilities which maintain the long term integrity of the crude helium stockpile, and would continue to reserve its right of ownership of helium on public lands. During the proposed transition period, a small volume of the reserve might be sold to the private sector so that the needs of the Federal agencies could be met. However, once the transition period has ended, private industry crude helium needs would have to be obtained from flowing natural gas.

Question: What impact will the change in the government's role in the helium industry have on the helium market? Specifically, what is your estimate of the future price of helium?

Answer: The future price of helium will probably rise; however, we currently have no valid estimate of what the price will be. The Bureau intends to commission a follow-on study conducted in the spring of 1989 to address this question.

Question: Helium has become an important commodity to a number of federal agencies. NASA and the Department of Defense come to mind immediately. What are other federal agencies that use significant amounts of helium? Have these agencies been asked to comment on the possible effects of the helium sale plan on their budgets and operations?

Answer: Although there are others that use smaller, less significant volumes of helium, the major Federal users are NASA, DOD, and DOE. In February 1988, these agencies were requested to comment on the proposal to sell the Government's assets to a private company. Also, draft legislation has been prepared under which the proposal could be implemented. This package has been forwarded by OMB to the other Federal agencies for comment.

General Administration

Question: The Subcommittee Staff has received reports that the Bureau has been directed to use funds that were appropriated for Bureau research, ironically, to do a contract study of the feasibility of conducting future research by contract. Is this report correct? Who has directed you to do this? How much is being spent for this contract feasibility study? I presume that you will not proceed with this study until you have secured the subcommittee's reprogramming approval, is that correct?

Answer: The Bureau of Mines is planning to do a contract study of the feasibility of conducting by contract the research which is now being done in-house. The Bureau has been directed to do this study by the Department of the Interior as part of the Department's privatization initiatives. The intent of these initiatives is to improve efficiency of government operations through transfer of commercial activities to the private sector. The objective of the contract feasibility study is to collect data which can be used to determine the practicality and desirability of conducting the Bureau's current in-house research by the private sector. The estimated cost of this feasibility study is $250,000. This project is a management study to improve the efficiency of the Bureau's research program and we expect to consult with the subcommittee as the study proceeds.

FTE Level

Question: In the Statement of Managers that accompanied the Conference report for the FY 1989 Appropriations bill, the Bureau was provided $2,200,000 to maintain employment throughout the Bureau. The Bureau's FY 1990 budget justification, on page BOM-143, shows a reduction in full-time-equivalent employment (FTEs) of 55 from the FY 1989 level of 2,077 to the FY 1990 requested level of 2,022. In view of the Congressional directive, what is the rational for this reduction? In the event the Congress disagrees with your proposed reduction, how much would be required in FY 1990 to restore the 2,077 FTE level?

Answer: Although the directive to maintain employment was contained in both the Senate and House Committee Reports on the Bureau's FY 1989 Appropriation Bill, the $2,200,000 proposed to be provided for that purpose in the Senate version was not sustained by the Conference. The Bureau's FY 1989 FTE ceiling is consistent with the Congressional directive, however, being 48 FTE above the FTE actually used Bureauwide in FY 1988.

The reduction in FTE proposed for FY 1990 is consistent with the Bureau's funding request, which shows a reduction of $18 million in budget authority. The rationale for the employment reduction is simply that the FTE would not be required at this lower funding level.

If the Congress elects to restore the FTE, the funds required would depend on the particulars of the work the Congress intends them to do. Some efforts could, for example, require significant expenditures for acquisition of equipment, supplies, or materials, or travel, while others would not. The Bureau's estimated average direct cost per FTE for salaries and benefits is estimated to be $41,486 in FY 1990, so restoration of the 55 FTE would cost $2,281,730 for payroll expenses only, exclusive of any additional costs in other object classes that might be associated with the projects on which these people would be working.

Mandatory Cost Increases

Question: Last year the Bureau requested what was originally intended to be a one-time cost of $3.0 million resulting from a Superfund settlement negotiated with the Robinson Brick Company (ROBCO) of Denver, Colorado. These funds were subsequently appropriated to reimburse the Environmental Protection Agency for cleaning up radioactive wastes generated seventy years ago by the Bureau's activities at the National Radium Institute, a private organization. The FY 1990 budget requests an additional $10.5 million for the ROBCO Settlement and notes there will be further, unspecified costs in the future. Why has the cost to clean up this facility increased so dramatically? What can you tell the Subcommittee about costs associated with this clean up? How confident are you that these out-year costs are accurate?

Answer: The previous estimate of $3.0 million for the cost of removing radium production waste from the site of the old National Radium Institute was based on a preliminary assessment by EPA using a 1982 site survey by ARIX Corporation.

Sampling in 1987 during site characterization by another EPA contractor, UNC (United Nuclear Corporation), found waste from the radium production process extended to greater depth than anticipated. The subsequent increase in the volume of contaminated soil that EPA estimated must be removed from the site by permanent disposal increased the estimated cost to $13.5 million. When removal began in May, 1988, more waste was found. The volume of radium production waste excavated is nearly seven times more than the first estimate. Total costs that the Bureau is responsible for at the site are now estimated by EPA to exceed $20 million.

In September, 1988, as the excavation of radium production waste was nearing completion, UNC discovered considerable quantities of waste from lead-zinc smelters that occupied the site prior to the National Radium Institute. It appears the oxidation of sulfide minerals in the smelter waste acidified water percolating through the waste piles. The percolating acid waters are believed to have leached both the radium wastes and the smelter wastes. The effect was to disperse contaminants (radionuclides, lead, zinc) deeper into soils on the site.

The presence of metals processing waste in some of the same soil contaminated with radionuclides from radium production has complicated the problem of disposal of contaminated soil from the site. No hazardous waste disposal landfill, the preferred alternative by EPA for contaminated soil removed from the site, can currently accept waste containing both radioactive and heavy metals contamination. One candidate site near Clive in Tooele County, Utah, is in the process of seeking modifications to its operating license to permit disposal of the radioactive and heavy metals contaminated material.

Some of the radium production waste from the site is not contaminated with metals from the smelter waste and it may be feasible to dispose of this material separately. The facility in Utah or a new hazardous waste disposal landfill under consideration near Uravan, Colorado, are the most likely disposal sites for the radium production waste not contaminated with heavy metals.

The current EPA estimate for total cost to the Bureau is over $20 million, which would likely require additional funding in FY 1991 or later. The increased volume of material that must be disposed of from the site and the specialized disposal facility required for soils contaminated with both radium and metals production waste have increased estimated costs for completion of the cleanup beyond the initial estimate of $3 million. EPA issued a Request For Proposals (RFP) that closed on January 26, 1989, asking for bids on the transport and disposal of waste from the site. Competitive proposals are currently being evaluated in a formal process that is scheduled to be completed on April 14, 1989.

The current estimate of the volume of material that must be disposed of is based on sampling by the EPA site contractor, UNC, during cleanup work on the site. Another site characterization survey has been specified by EPA for the site to determine the extent of any remaining metals and radionuclide contamination. The site characterization survey will not be completed for several months though intermediate results will be available periodically.

The Bureau has become active in reviewing EPA planning for the site. The interest of the Bureau is in providing EPA with technical assistance based on Bureau expertise to expedite the cleanup process and to avoid further unexpected growth in rehabilitation costs for the site.

Bureau Initiatives

Question: The Bureau's budget request for FY 1990 includes $5.8 million for advanced materials research, data collection, and commercialization activities. How does this request compare with funding for these activities in FY 1989 and FY 1988? The Bureau requested $350,000 for FY 1989 to develop a census of advanced materials producers, products, processes, and production figures. Has the advanced materials census been completed? What is the status of the 5-year plan for the Advanced Materials program that I requested last year? Would you summarize the plan briefly at this time? How is this plan coordinated with advanced materials research which is being performed by the U.S. Department of Energy, the Department of Defense, and other Federal agencies?

Answer: The requested funding level, $5.8 million, is the same as for FY 1989 and FY 1988. The advanced materials census is approximately 50% completed. Information for about 1000 companies, obtained by examination of over 17,000 sets of company data, have now been compiled. It is expected that about that many more will be entered, and the census should be completed by the end of FY 1989. The plan was completed on June 15, 1988. It constitutes the basis for all current activities, planning, and organizational details. The advanced materials plan consists of 4 program areas, summarized below:

1. Information. The primary purpose is to compile data bases from which information can be obtained by Bureau of Mines staff, other agencies, or industry for preparation of projections, periodic publications, special reports, or business and policy decisions. No such data bases, kept up-to-date over a number of years, now exist; this will eventually become a unique resource. Responsibility for these activities is assigned to the Office of Advanced Materials Coordination, the Division of Mineral Commodities, and the Division of International Minerals.

2. Immediate Policy Support Studies. Because compilation of comprehensive data bases containing sufficient historical continuity to enable sound policy development will require several years, these studies will provide preliminary guidance for analysis of public and private sector issues that is needed in the short-term. Reports will provide clarification of issues, information on which to base decisions about new materials, and assessments of materials availability. Primary responsibility for these efforts is assigned to the Division of Policy Analysis.

3. Materials System Evaluation. The purpose of these studies is to develop the capability to make life cycle comparisons of alternative materials, considering the economics at all stages from feedstocks to disposal or recycling. Pending development adequate data bases on other advanced materials, the major effort is a systematic investigation of actual and potential replacement of metals by plastics; sufficient data are available to accomplish this work. Primary responsibility for these efforts is assigned to the Division of Resource Evaluation.

4. Research. Advanced materials research is conducted as an element of the Bureau's Minerals and Materials Science program. Focusing on the raw material aspect of advance materials. Specific materials research is directed toward developing advanced materials with particular properties and performance characteristics, but with one significant difference that distinguishes it from other Federal programs; the main thrust of Bureau advanced materials research is to accomplish this using domestically available minerals in the most efficient manner possible. The program provides the basic scientific knowledge to facilitate conservation of mineral resources by reducing losses due to wear, corrosion, breakage, or inability to recycle because of particular materials properties. In addition, the program provides basic knowledge to stimulate new uses for domestically produced materials and to stimulate development of domestic substitutes for materials that require significant quantities of imported strategic and critical materials.

The Chief of the Office of Advanced Materials Coordination and the Program Manager for Minerals and Materials Science are members of the Committee on Materials (COMAT) in the Office of Science and Technology Policy (OSTP) and subcommittees of COMAT, as well as the Interagency Materials Group (IMG), which is hosted by the National Science Foundation. These committees share information about all materials research activities. The elements of the 5-year plan have been provided through these committees to program managers of all the agencies, including DoE and DoD. This awareness of Federal materials research enables the Bureau to plan research activities within its assigned areas of responsibility without unnecessary duplication.

Question: In a May 1985 report, the Office of Technology Assessment (OTA) expressed concern regarding the adequacy of current engineering curricula and training of engineers in the use of advanced materials. This concern was echoed in the 1988 report of the National Critical Materials Council. Given the importance of progress in advanced materials to the productivity and competitiveness of our economy and to this nation's defense requirements, what plans does the Bureau have for addressing the problem of the need to upgrade engineering curricula?

Answer: The Bureau of Mines shares these concerns and is sympathetic to the importance of training of engineers in the use of advanced materials. The Bureau of Mines conducts research in cooperation with portions of the University community, employs students working on degree programs, and supports University research and training programs through the Mineral Institutes program.

Policy Analysis

Question: The Bureau is proposing to spend $3.2 million in FY 1990 to analyze the costs likely to be imposed on the U.S. minerals industry resulting from new regulatory compliance requirements. This effort will include an analysis of proposed acid rain legislation that may be passed by the Congress. EPA Administrator William Reilly has testified at his confirmation hearing that the Administration will be sending up an acid rain bill. What role, if any, will the Bureau play in the development of that legislation?

Answer: The Bureau has completed a study on the potential impact of acid rain legislation on the aluminum smelting industry. The study concluded that the implementation of any of five acid rain bills analyzed would adversely impact the competitiveness of the domestic aluminum smelting industry. Staff members of three congressional committees in the 100th Congress were briefed on the results of this study. Staff members of relevant committees in the 101th Congress will also be briefed. Studies are planned on the impact of acid rain legislation on the silicon and ferro-silicon industry and the steel industry. The Bureau will brief congressional staffers on these studies when concluded. The results of all of these studies will be given to EPA.

QUESTIONS SUBMITTED BY SENATOR McCLURE

Question: The Bureau of Mines operated a radium production facility in Denver from 1913 to 1918 under a cooperative agreement with the National Radium Institute. This process captured some seventy percent of the radium, but the remaining radium, uranium, and other radionuclides were left on the property as waste. The Bureau negotiated a settlement with the Robinson Brick Company of Denver, Colorado, to reimburse the Environmental Protection Agency for cleaning up these wastes (pg. 3). During last year's hearing you indicated that the $3.0 million requested in FY89 may not cover the cost of the project. Unfortunately, that appraisal was accurate, and you have requested $10.5 million in FY90 for this cleanup. Can you explain what was found that required the increase?

Answer: The previous estimate of $3.0 million for the cost of removing radium production waste from the site of the old National Radium Institute was based on a preliminary assessment by EPA using a 1982 site survey by ARIX Corporation. Sampling in 1987 during site characterization by another EPA contractor, United Nuclear Corporation (UNC), found waste from the radium production process extended to greater depth than anticipated. The subsequent increase in the volume of contaminated soil that EPA estimated must be removed from the site for permanent disposal increased the estimated cost to $13.5 million. When removal began in June, 1988, the contractor found much larger quantities of radium waste than had been expected, and also heavy metal residues from previous smelting operations. The volume of radium production waste excavated is nearly seven times more than the first estimate.

In September 1988, as the excavation of radium production waste was nearing completion, UNC discovered considerable quantitates of waste from lead-zinc smelters that occupied the site prior to the National Radium Institute. It appears the oxidation of sulfide minerals in the smelter waste acidified water percolating through the waste piles. The percolating acid waters are believed to have leached both the radium wastes and the smelter wastes. The effect was to disperse contaminants (radionuclides, lead and zinc) deeper into soils on the site.

The presence of metals processing waste in some of the same soil contaminated with radionuclides from radium production has complicated the problem of disposal of contaminated soil from the site. No hazardous waste disposal landfill, the alternative preferred by EPA for contaminated soil removed from the site, can currently accept waste containing both radioactive and heavy metals contamination. One candidate site near Clive in Tooele County, Utah, is in the process of seeking modification to its operating license to permit disposal of both types of waste.

Some of the radium production waste from the site is not contaminated with metals from the smelter waste and it may be feasible to dispose of this material separately. The facility in Utah or a new hazardous waste disposal landfill under construction near Uravan, Colorado, are the most likely disposal sites for the radium production waste not contaminated with heavy metals.

Question: Do you think this additional $10.5 million will fund the project?

Answer: The current EPA estimate for total cost to the Bureau is over $20 million; therefore, funds in addition to the $3.0 million appropriated in 1989, and the $10.5 million requested in 1990 will be needed in subsequent fiscal years to complete the cleanup and final disposal. The increased volume of material that must be disposed of from the site and the specialized disposal facility required for soils contaminated with both radium and metals production waste have increased estimated costs for completion of the cleanup.

Question: Is the Bureau reimbursing EPA for the cleanup or is the Bureau actually contracting for the work?

Answer: Under terms of the Memorandum of Understanding between the Bureau and EPA for cleanup of the ROBCO site, the Bureau agreed to reimburse EPA for the costs attributable to operation of the National Radium Institute between 1913 and 1918. EPA has contracted with UNC to oversee rehabilitation of the site. The Bureau has become active in reviewing EPA planning for the site. The interest of the Bureau is in providing EPA with technical assistance based on Bureau expertise to expedite the cleanup process, to avoid further unexpected growth in rehabilitation costs, and to obtain release of the Bureau from liability for the site.

Policy Analysis

Question: You have requested an additional $677,000 (15 percent) in the Policy Analysis program for FY 90. This increase is to be used to expand current regulatory analysis efforts to ensure that estimates of the economic benefits and costs of alternative regulations for the mineral industry are brought to the attention of Federal and State decision-makers (pg 36). Did you work with industry in developing this expanded program? How responsive has EPA been to your analysis? Are they asking for information that you and I would feel is important to their analysis? Is your information incorporated into their decisions?

Answer: Discussions have been held with Congressional staff, the American Mining Congress, the Aluminum Association, and other groups in defining areas of regulatory concern. These areas of concern focused on EPA regulations covered under the Resources Conservation and Recovery Act (RCRA) affecting all mineral wastes, and impending acid rain legislation affecting the minerals industry directly through increased utility rates which are passed on to the industry. These two areas will constitute the primary thrust of the regulatory initiative. The American Mining Congress has actively facilitated the flow of information on mine waste production of individual copper companies, data integral to the mine waste initiative. EPA has been extremely positive. EPA staff have been actively involved in the contract on the development of a mine waste analytical system. The overall reaction has been to welcome the Bureau's independent and unbiased assessment of the impact which which government regulations have on the minerals industry. In particular, EPA's analysts have been active participants in current projects sponsored by the Bureau and have indicated a willingness to continue this participation. EPA plans to utilize the results of the Bureau's estimates of the economic impact on site-specific operations as well as the impact on the industry as a whole. Through our cooperation and interaction with EPA, Bureau analysis serves as a technical basis for future rulemaking. The Bureau also is extensively involved in the review of proposed rulemaking, and has provided a perspective to EPA that enhances cost-effective regulations.

Mineral Commodities

Question: The FY90 requested amount for the Mineral Commodities program is $779,000 above the FY89 enacted level but is $57,000 below the FY90 base level. Is there a reason the FY90 base level for this program is so high?

Answer: The Bureau reclassifed $763,000 ADP costs to Mineral Commodities. These funds were formerly carried within the Automatic Data Processing function. The adjustment is discussed on page BOM-22 of the Budget Justification, FY 1990.

The base level for the program reflects salary and retirement adjustments as well as some costs being absorbed by the program rather than being funded by an additional requested amount.

In Situ Leaching

Question: The Bureau's FY89 budget submission states that before in-situ mining can be considered an economical method of mining a specific mineral, basic data needs to be gathered and analyzed. In FY89, Congress essentially rejected that advice and provided the Bureau with an additional $3.5 million in FY89 for the ongoing in-situ project in Casa Grande, Arizona. The Bureau's FY90 budget request (pg. 74) again does not request funds for the Casa Grande project because the technology has "grown to a point where further development is more properly conducted in the private sector." This seems to be a shift in the Bureau's thoughts on in-situ leaching. Last year there wasn't enough information on in-situ and this year the private sector should take over the Casa Grande project. Is the Casa Grande project going in a different direction than the Bureau's basic research?

Answer: The Bureau's thoughts on the relationship between the Casa Grande project and the other components of its in situ leaching research are the same now as they were one year ago. For in situ leaching to become a widespread mining method, considerable basic data must be gathered and analyzed. Toward this end, the Bureau asked for and received a budget initiative that significantly increased the funding on in situ leach mining research beginning in FY 1989. Several new projects were started in FY 1989 on critical aspects of solution control and containment, ore body preparation, characteristics of leachable ore bodies, and broadened applications of the in situ method. The FY 1990 budget request reflects a continuation of those efforts. The base program is not going in a different direction than is the Casa Grande project; the base program emphasizes more fundamental issues and broader applications of in situ leach mining. In its FY 1989 budget request, the Bureau did not ask for funding for the Casa Grande project, since the Bureau believes that industry could adequately perform the research project. The technology for in situ leach mining of such copper oxide deposits was advanced to the point where the project could be considered a site-specific demonstration. The Bureau believes that the Casa Grande project is primarily a demonstration of leaching of a specific ore that should be funded mostly, if not completely, by industry. An additional year of background Bureau studies on the project supports the Bureau's claim in its FY 1990 budget request that the technology for leaching copper oxide deposits has grown to the point where further development is more properly conducted in the private sector.

Question: Has the the project met the Bureau's expectations?

Answer: The Bureau is satisfied with the cooperative agreement negotiated for Phase I of the project funded with FY 1988 funds. The statement of work negotiated with Santa Cruz Joint Venture provided the Bureau with an opportunity to achieve its in situ leaching research goals while progressing toward the intended demonstration. The partners began field activities on the site in November 1988. Early tests performed at the proposed demonstration site have caused the Bureau and cooperators to consider shifting its location within the same deposit. This would cause a 2-month delay in the project--rather insignificant in a project of the proposed scope. Negotiations for Phase II work in the FY 1989 appropriation are proceeding smoothly.

Question: What would be the loss in a technical sense if the project were halted?

Answer: Most of the technology for in situ leaching copper oxide deposits through vertical holes has been developed. Continuation of the project will provide site-specific data useful to the Bureau's in situ leaching program, but it would not be central to the Bureau's emphasis on fundamental issues and broad applications. Because of this, the Bureau believes that the Casa Grande project could be funded primarily by the private sector. If the project were halted, however, an opportunity to complete and validate this technology would be delayed. The private sector is reluctant to adopt technologies without validation in a field-scale test. However, results from the two years of field tests already completed could be made available and used by private industry. Termination of this project would delay the Bureau's work with Federal and state regulatory agencies to develop and test reasonable regulations for in situ leach mining copper.

Question: What is the production potential of the project?

Answer: The project could produce 3 million pounds of copper.

Question: Have you discussed the potential revenues from the sale of the ore?

Answer: Yes, revenues have been discussed. The FY 1988 appropriation language allowed the cooperator to use revenues from sale of any copper produced to defray his 25% share of the project costs. This has been incorporated into the agreement between the parties.

Occupational Health

Question: One of the goals of the Occupational Health program is to develop technology that will allow industry to reduce average dust exposures of miners by 30 percent by the year 2000. The FY90 budget proposes a reduction of $832,000 in respirable coal dust control research because improved technologies have reduced the dust level in coal mines during the past ten years. Does this proposed budget decrease jeopardize the 30 percent reduction goal?

Answer: New respirable dust control technology which has been developed during the past 5 years is now beginning to be commercialized and made available to the mining industry by equipment manufacturers. The technology includes efficient water-powered dust collectors, modified ventilation techniques that make more efficient use of the available mine air, and recently-developed expert systems that allow the mine operator to obtain and effectively use the research already accomplished by the Bureau. Since these technologies are expected to continue to bring dust levels down, the proposed budget decrease in respirable dust control research will not jeopardize the 30 percent reduction goal, although it may be difficult to reach by the year 2000.

Question: According to the FY90 justification, the incidence of black lung disease and number of claims awarded annually have been declining about 5 percent a year since 1980 (pg. 77). To what do you attribute that decline? Improvement in health and safety technology or technology which keeps the miner away from the face?

Answer: The decline in black lung disease is attributed to improvements in dust control techniques developed by Bureau research and industry since 1970; for example, the Shearer-Clearer System is being used in nearly two-thirds of the longwall operations to reduce dust levels. The system is composed of specially-designed water sprays mounted on the coal cutting head (the shearer) and the longwall machine frame. The shearer sprays are effective in suppressing dust immediately after coal fracture and the frame-mounted sprays contain the dust cloud making the shearer sprays more effective. The Bureau plans to achieve further reductions in miner's exposure to dust by reducing the need for them to be present in dusty areas near the working face.

Mine Disaster Prevention

Question: The Bureau's FY90 budget proposed to decrease the Mine Disaster Prevention program by one third (FY89-$6.8 million; FY90-$4.7 million). Recent mine disasters have cost the industry an average of $120 million per year. The justification indicates that by the year 2000, new approaches dealing with mitigating the causes of mine disasters will reduce the number of fires, explosions, and gas outbursts by 25 percent. The program decrease is a result of combining research efforts addressing mine fire emergency and recovery operations with other mine disaster investigations (pg. 89). Can you really reduce the cost of this program by combining research efforts?

Answer: The decrease is not totally offset by combining research efforts. In combining research efforts, the bureau is maximizing the utilization of its limited research resources on the highest priority problems in the mine disaster area. Some reduction in the costs of the program is realized through the combining of efforts having similar technological needs or that address similar related hazards. For example, the research results from efforts to improve face ventilation for dust control can serve to also control methane emissions to minimize frictional ignitions.

Question: If so, have all of the Bureau's research programs been analyzed to determine cost savings if they were combined?

Answer: Yes, the Bureau continually seeks to maximize its research resources. We have examined not only combining research efforts when appropriate, but also the transfer of research results from one area to another when those results can be utilized directly or built upon to obtain the objective.

Question: If so, then is the budget also saying that the program will not be impacted by a reduction of one third?

Answer: When a research program is reduced by one-third, the program is impacted; lower priority work must be either reduced or eliminated. In this case the research is directed toward obtaining research results that address the most serious disaster causing hazards.

Strategic and Critical Materials

Question: I find it very interesting that the Bureau has proposed a decrease in your overall funding for FY90 of 11 percent, and yet you have found room to increase the budget for the Vulnerable Strategic and Critical Materials program. I commend you for that effort. It is also interesting that the Geological Survey has requested a level budget for FY90 yet they have proposed a slight decrease in their Strategic and Critical Material program. Of course the programs perform different tasks--they both focus on one of the more important aspects of defense: strategic and critical materials. What do you see that the Survey doesn't?

Answer: The Geological Survey and the Bureau work together to find new sources of Strategic and Critical minerals. While the Geological Survey's primary mission is to provide basic topographic and geologic information that facilitates exploration by the private sector, the Bureau's primary mission is to assess the potential to recover the minerals from potential sources. In addition to recovery from new sources, the Bureau's Vulnerable Strategic and Critical Metals program (VSCM) includes recovery from scrap and wastes, which is not part of the Geological Survey's mission. The Bureau believes that the most likely means to reduce import dependency for strategic and critical materials is through improved utilization of scrap and waste and through the development of substitute materials and conservation, which is part of the Materials program. In FY90 the VSCM program is being expanded to include additional metals, including "high tech" metals. These additional metals are mentioned in the Anti-Apartheid Act and/or the recent DOD list of strategic metals, as listed in the Budget Justification. Scrap and waste also are likely sources for most of these additional metals. The increased attention on scrap and waste and the expanded list of critical and strategic metals are the reasons for the Bureau's budget increase in the VSCM program.

Question: What was your request of OMB for this program?

Answer: The Bureau requested $6,972,000 from OMB in FY90. This does not include an additional $5,811,000 requested for substitution research under the Materials element.

Question: Governmentwide, what isn't being done in this area that you feel we should be doing?

Answer: New materials, such as intermetallic ceramic composites made from domestically available materials can potentially be substituted for stainless steels or superalloys containing strategic and critical cobalt and chromium. Development by the private sector of these materials is hampered by a lack of basic knowledge of synthesis and processing methods.

A lack of processing and control technology for making the material from its constituents was identified as a major national need in the National Materials Advisory Board and Office of Technology Assessment studies. This is especially true for advanced materials where the properties of advanced materials are more a function of the processing steps used than the final chemical composition. Most of the materials research now in progress is directed at the development of new materials and not at the synthesis, purification, and processing of the raw material needed for commercial production of these materials. There is an urgent need for novel and innovative ideas or approaches to synthesis and processing.

Control of Mine Drainage and Liquid Waste

Question: The Bureau's budget for FY90 includes a reduction of $1.9 million (-35 percent) in the Control of Mine Drainage program. As a result of this proposed reduction you have proposed to terminate research developing environmentally safe technology for the permanent closure of inactive metal mine sites in the West (pg. 119). In addition, parallel research on the recovery of metal values from mine waste will be reduced and extended to a five year period. Is the research for inactive metal mine sites being terminated because the technology cannot be developed?

Answer: No, the Bureau believes that technology can be developed and is needed for the cleanup and environmentally safe closure of inactive metal mines in the West. A number of these metal mine sites are on the National Priorities List (NPL) for cleanup under the Superfund Legislation. However, industry, EPA, and EPA contractors have little cost effective and feasible technology for permanent cleanup and closures of these sites. The most widely used technologies are capping, mine sealing, and solid waste removal and redisposal in approved landfills. These are costly and may not offer permanent solutions. They also do not reduce the volume and toxicity of the wastes or recover values from the waste that may offset the cleanup costs. In severe cases, water treatment plants may have to be employed in perpetuity and the resulting sludges would be disposed of in approved landfills. The reduction in the budget for the permanent closure of inactive metal mines allows us to maintain Bureau priority programs directed at waste problems of active mining operations. This includes unit processes for water treatment that do not produce voluminous and potentially toxic sludges, and safe underground disposal of tailings. These technologies will also have applications to closed mines.

Question: What was the current schedule and funding plan for that research?

Answer: Mine closure research has been conducted primarily at the Bunker Hill Superfund site by the Spokane Research Center and the University of Idaho. Funding in FY 1989 includes $565,000 in the President's budget and $1.2 million as a Congressional add-on. Funding of $740,000 is proposed in FY 1990.

Question: What is the schedule and funding plan for parallel research on the recovery of metal values from mine wastes?

Answer: Approximately $350,000 is budgeted in FY 1989 for parallel research to recover metal values from mine wastes. No funds are budgeted in FY 1990. This work is carried out primarily at the University of Idaho and the FY 1989 funds are part of the $1.2 million Congressional add-on. In addition, approximately $2.2 million is in the FY 1989 base program for liquid decontamination technology. Some of this technology may be applicable to the recovery of metal values from acid mine drainage waters. In FY 1990 no funds are budgeted for the recovery of metal values from mine wastes at inactive metal mine NPL sites.

St. Joe Flame Reactor

Question: In FY89, Congress provided the last $500,000 increment in a three year program for what is commonly known as the St. Joe Flame Reactor (pg. 124). This research was directed towards the detoxification and/or metal recovery from hazardous steel making wastes using flame reactor technology. Do you feel this research will have broad applications or will it be limited in scope?

Answer: The Bureau is still optimistic that flame reactor technology will have broad application both inside and outside of the steelmaking industry. Project personnel are close to working out all of the permitting problems with the Pennsylvania Department of Environmental Resources (DER) in order to have sufficient quantities of hazardous wastes from other industries shipped to their test site. When all of the details have been arranged, tests will be conducted and data evaluated prior to making the determination of the applicability of flame reactor technology to other wastes. Meanwhile, various alternative materials are being evaluated as to suitability for flame reactor processing.

Question: Now that the research is coming to a close, is there a next logical step? If so, please provide details for the record.

Answer: Final modifications are currently being made to the flame reactor to enable it to continuously process larger test samples than was previously allowed. Metal recovery accessory equipment is also being installed. Tests later this year will evaluate the economic potential of various metal and metal oxide recovery scenarios and Horsehead Industries (formerly St. Joe Minerals Company) will decide where their marketing opportunities lie. Since the slag produced from processing electric arc furnace steelmaking dusts meets the requirements imposed by hazardous wastes regulations, project personnel have also requested the Pennsylvania DER that this product be delisted as a hazardous waste. Delisting will allow them to undertake the next logical step i.e., marketing their slag product, which in turn will enable them to use their current reactor on a commercial scale. Installation of other reactors at other sites will follow later.

National Mine Land Reclamation Center

Question: In FY88, Congress established the National Mine Land Reclamation Center to expand research in reclamation of the surface effects of mining (pg. 126). West Virginia University was established as the lead agency and four affiliate universities were designated. The justification indicates that the program is designed to coordinate reclamation research nationwide for all mineral commodities beyond the two major subdivisions of reclamation research, abandoned mine land and active mining. If the Center performs a coordinated research function, why do you feel the Federal government does not benefit?

Answer: The Federal Government and the Nation always benefit from good research performed by competent researchers, regardless whether they be in other Federal agencies, universities, industry, or elsewhere. Such research provides valuable information to complement previously completed or ongoing work, and can be used in program planning. However, we believe that the States and industry are the major beneficiaries of the research results from the National Mine Land Reclamation program and, therefore, funding for the program should be provided by the beneficiaries of the research.

Question: Is there a way to re-structure to make it more beneficial to the Bureau?

Answer: Considerable thought was given to the structure of the program in the conceptual stages. National coordination is necessary for research into such subdisciplines of reclamation as hydrology, subsidence, soils, mining wastes, erosion and sediment control, because of regional difference. The present structure of the National Center, with Eastern, Midwestern, and Western regions, each of which has an advisory committee, seems to be the best structure to achieve the goals of the program. As time progresses, there will be some degree of "fine tuning" of the system; however, we do not anticipate the need for any restructuring.

Question: How does this program differ and/or complement the Mineral Institutes program?

Answer: The National Mine Land Reclamation Center (NMLRC) universities, except for North Dakota State, are all Mineral Institutes. We coordinate any Mineral Institute funded projects that are related to the NMLRC, and vice versa. Program planning takes the two programs into account. The NMLRC complements the Mineral Institute program in that it provides a focus for reclamation research.

Question: Is there cost share involved with the program?

Answer: There is a cost sharing in the program. For FY 1988, the Federal share of the total was 58%, and the universities' share was 42%. All the budget data for FY 1989 has not been compiled as yet; however, we expect the percentages to be in the same range.

Inspector General's Audit

Question: An audit performed by the Department's Inspector General indicated that the Bureau did not fully comply with the President's 1982 policy on the Government's research role. The policy states that the Government research role should be in long-term, high-risk, high-potential-payoff research with wide generic application. The I.G. indicated that a significant portion of the Bureau's efforts involved applied or developmental research projects. The I.G. reviewed some of the Bureau's research projects and concluded that the Bureau was misclassifying certain research projects. The I.G. made several recommendations that essentially had nothing to do with the quality or scope of the research. Instead, their recommendations related to the definition of research according to the Office of Management and Budget. Of the projects the I.G. analyzed, were any added in the Congressional process? How has the I.G. responded to the Bureau's reaction?

Answer: Over the past few years, the Congress has added funds to the Bureau budget for work which is applied research or development. The Bureau also does some applied research and development in its base budget, particularly in the health and safety areas which included all of the projects cited in the I.G. report. Of the projects cited in the report which were claimed to be misclassified, all were in the Bureau's base program and were not added in the Congressional budget process.

The Bureau does not agree with the implication made in the I.G. report that Administration policy prohibited applied research and development. The Bureau has responded to the I.G. that we will emphasize basic research as appropriate and feasible. We have also agreed to use the OMB definitions for classifying research projects and we have included a clarification of those definitions in the budget document we submit to OMB. The I.G. has accepted the Bureau's response to the issue of the classification of research projects.

Question: One aspect of the audit I would like to focus on deals with the establishment of research priorities. The I.G. argued that the Bureau uses a practice of "full center funding." This practice allows projects to be funded based on the preservation of research center stability and on technical ranking of the proposals. The Bureau generally agreed with this recommendation but indicated that "full center funding" only occurs on the margin. How have you changed your funding patterns to reflect this?

Answer: Since the time of the I.G. audit the Bureau has revised the procedures used to select research projects. The new procedures require more documentation of the reasons for project selection. Only projects of high technical merit are selected for funding by Bureau program managers. These managers are documenting the basis for their selection of the projects. The I.G. has accepted the Bureau's response to this issue.

Question: How much helium is being produced from natural gas fields?

Answer: In 1988, about 2.3 billion cubic feet (Bcf) of helium was extracted from helium-rich natural gas produced from 12 fields located in 5 states.

Question: What is the potential production of helium?

Answer: Based on the Bureau's helium survey and evaluation function, estimated potential production of helium for 1988 was about 4.4 Bcf from 58 helium-rich fields in 12 states.

Question: How much helium is being lost from a lack of production?

Answer: Helium lost due to the lack of helium production is estimated at about 2.1 Bcf in 1988.

Question: What are the current uses of helium?

Answer: Estimates of 1988 domestic uses of helium are:

	Million cubic feet
Cryogenics (superconductors, NASA and DOD launch precools, low-temperature properties, magnetic resonance imaging)	450
Welding (stainless steel, aluminum, extra strength alloys)	450
Pressurizing and purging (aerospace industry, space shuttle military launches)	410

Controlled atmospheres (production of silicon, uranium, plutonium, tritium, fiber-optics)	210
Breathing mixtures (Navy diving, off-shore well diving)	40
Leak detection (guidance system, refrigeration, air conditioners)	40
Other (lasers, Strategic Defense Initiative (SDI) lifting gas, heat transfer, chromatography)	200
Total Domestic	1,800

U.S. exports of helium were about 600 million cubic feet (MMcf).

Question: How have helium uses changed over the past ten years (public and private)? Have any uses been substituted with other resources?

Answer: Total demand for U.S. helium has increased from 1,075 million cubic feet (MMcf) in 1978 to 2,420 MMcf in 1988, a 125 percent increase. Domestic demand has increased 103 percent; export demand, 228 percent. Changes by uses are as follows:

	Percent change
Cryogenics	+ 61
Welding	+181
Pressurizing and purging	+171
Controlled atmospheres	+886
Breathing mixtures	- 44
Leak detection	+ 6
Other	+ 59

Substitutions for helium are very limited because helium is inexpensive compared to the other costs of a job, e.g., labor. There are some limited substitutions, such as argon for welding, hydrogen for lifting gas and breathing mixture research, and nitrogen for pressurizing, but the volumes involved are small.

Question: What are the anticipated future uses?

Answer: During the next 5 years, it is anticipated that no new use categories will be added to the above list. However, growth within two of the categories is anticipated, which will account for an average growth rate of 5 to 10 percent annually. Cryogenics is expected to increase because of more space activities by NASA and DOD, and more magnetic resonance imaging machines being installed. Funding levels for the Superconducting Super Collider (SSC) will determine how much will be added to helium consumption for magnet production and testing. Pressurizing and purging will be dependent on the number of space shuttle launches which is expected to increase substantially over 1988 levels. Compared to possible increases in these two large categories, volume increases in the other categories will be negligible.

Question: What are the average costs of producing helium for the past ten years? Next five?

Answer: The 10 year (1979-88) average annual cost for the production and sale of Bureau helium is $8,159,000 (about $30 per thousand cubic feet (Mcf)) and the estimated average 5 year (1989-93) cost is $11 million ($35 per Mcf). Annual helium production costs remain relatively stable; however, unit costs vary because of fluctuations in the Federal helium sales volumes.

QUESTIONS SUBMITTED BY SENATOR DeCONCINI

Question: Mr. Director, as you know, the Committee has been very interested and supportive of in situ mining and has provided funding for the Santa Cruz copper mining research project at Casa Grande, AZ. Could you provide the committee with an explanation of the status of the project at this time?

Answer: The Bureau is conducting the Santa Cruz project to obtain engineering and cost data on in situ leach mining for copper oxide deposits. A prime purpose of this study is to provide information to the mining industry on designing in situ leaching operations for any given copper oxide deposit. The structure of this experiment originated from a contract study on in situ leach mining. From this study, the Bureau received a 5-volume draft contract report, "Generic In Situ

Copper Mine Design Manual." Beside design information for in situ copper leaching operations, the contract report contained a detailed testing plan for a field experiment at the Santa Cruz site near Casa Grande, AZ. This plan provided the basis for the present project.

The first two years of funding for this experiment were provided by Congress in FY 1988 and FY 1989 appropriations. The Bureau established a cooperative agreement with Santa Cruz Joint Venture, the site owner, to conduct the experiment and contribute 25 percent of the funding. The Bureau awarded this Cooperative Agreement on September 6, 1988.

The Cooperator and Bureau met with state and Federal agencies to define requirements for permits necessary to conduct a field experiment. In November 1988, the Bureau and the Cooperator began obtaining site-specific information necessary for the permits. Early tests performed at the proposed demonstration site have caused the Bureau and Cooperator to consider shifting its location within the same deposit. This may cause a 2-month delay in the project--rather insignificant in a project of the proposed scope. Negotiations for Phase II work funded in the FY 1989 appropriation are proceeding smoothly.

Question: In view of the fact that the project was somewhat delayed by a later than usual Appropriations Bill in FY 1988, as well as negotiations on a cost sharing agreement, would you describe the project as being close to the originally contemplated schedule?

Answer: This project was structured to last approximately 5 years. It effectively began when the Bureau awarded the cooperative agreement, placing the expected completion in September 1993. The delay mentioned in the question is not significant.

Question: What level of funding in FY 1990 would be necessary to put the on-site demonstration program back on schedule? What would be accomplished in FY 1990 at that level of funding?

Answer: As discussed in the previous answer, the Bureau believes the project is on schedule. If Congress appropriates funds to continue this project in FY 1990, approximately $7.5 million is required to keep it on a 5-year schedule. On-site facilities necessary to conduct the leaching experiment will be constructed with these funds.

Question: What is the status of the project's environmental permitting process with the Arizona Department of Environmental Quality?

Answer: Bureau researchers have worked closely with staff of the Arizona Department of Environmental Quality as well as the State's Department of Water Resources and the U.S. Environmental Protection Agency to establish permit requirements. Acquiring the permits is the Cooperator's responsibility. Current site activities are directed toward obtaining the information required by the State as part of the permit application. The State will use this information to decide whether to issue permits for the test holes and, eventually, for the project.

Question: It is my understanding that the Bureau is required to do an Environmental Assessment (EA) of the project. I have been informed that you intend to include, and in fact, solicit public involvement and local concerns in the EA process. I certainly encourage that approach and commend you for it. I believe I speak for my colleagues on the Committee, and reflect the opinions of the members of the Arizona delegation in that regard. Could you provide us with an update on the EA process?

Answer: The National Environmental Policy Act requires any Federal agency conducting an activity that may impact the environment to evaluate the anticipated environmental effects. To meet these obligations, the Bureau will determine the significance of any effects that may arise from the project and prepare an Environmental Assessment (EA) describing its findings. The site-specific data necessary to determine environmental effects are being obtained with the information that the Cooperator must gather for the permitting process.

The Environmental Assessment will form the basis for preparing either a Finding of No Significant Impact or a Notice of Intent. If the EA process reveals no significant impacts, the Bureau will prepare the Finding of No Significant Impact and proceed with the project. If the possibility of a significant impact emerges, the Bureau will either cancel the project or prepare a Notice of Intent and launch a full Environmental Impact Statement before continuing.

As part of the EA process, the Bureau has discussed environmental issues with local farmers and land-owner organizations. In addition, the Bureau plans to hold a public meeting in Casa Grande, AZ, in May 1989. At this meeting, the Bureau will introduce the project to the community and solicit input on environmental issues from the residents.

Question: I believe the Bureau has completed the cost/sharing negotiations with the non-Federal partner in regard to the on-site demonstration project. Is this the first major project in which the Bureau has cooperated with a non-Federal partner in this sort of arrangement? Would you describe it as a model for other projects?

Answer: The Bureau has negotiated Phase I project activities funded with FY 1988 appropriations and is presently negotiating Phase II funded by the FY 1989 appropriations. This is not the first major project in which the Bureau has participated with private industry. In recent years, however, the Bureau has emphasized research on fundamental issues and solutions to broad generic problems. Such an emphasis precludes devoting significant expenditures of Government funds to large, site-specific projects. If Congress appropriates funds to the Bureau for such large, site-specific projects, this cooperative agreement could be used as a model.

Question: From a Federal perspective, what are the advantages in having the Bureau of Mines directly involved in this research and demonstration project? How can information and knowledge gained from this project be beneficial to the copper industry in general, and to the public?

Answer: The prime advantage is that the information received from the project is available to the public. The Bureau also benefits by access to data that can be integrated into the Bureau's base research program on in situ leach mining technology. This allows the Bureau to provide better technology for other potential applications of in situ leach mining. Since the Bureau believes this method will lower domestic production costs while protecting miner safety and safeguarding the environment, the public will benefit from this involvement.

Question: Will the data from this project become the exclusive property of the non-Federal partner? Would the same be true if the project were to be completely funded by the private sector?

Answer: The Cooperative Agreement specifies that data obtained from this project must be provided to the Bureau for public dissemination. The Bureau has already published several reports on the laboratory data from tests on ore samples obtained from the site. If this project were completely funded by the private sector, the data would likely be proprietary and not available to the public.

Question: Are there other benefits to both the Federal and non-Federal parties from this kind of arrangement? Will it contribute to the Bureau's base research program?

Answer: This large-scale field experiment allows the Bureau to validate technology on in situ leaching that it might not otherwise be able to test. Although the data are site-specific, they can be compared with laboratory data and results of other field tests to establish the usefulness of methods for predicting leaching results and the economics of in situ leach mining. This will help the Bureau's base research on the method. The non-Federal cooperator benefits by having the technology tested on the specific deposit. The technology is immediately transferred to the cooperator and it is directly applicable to the project.

Question: In FY 1989, the Congress provided $500,000 to the Bureau's continuing in situ laboratory research program which is not cost-shared. Could you provide an explanation and update of this related research program? How does it relate to, and support, the on site demonstration?

Answer: The Bureau is conducting several activities with the $500,000 of non-cost-shared funds appropriated for this project in FY 1989:

1) Project coordination and overview.
2) Environmental assessment and coordination.
3) Laboratory testing of samples to relate expected leaching results to actual data when they become available. These tests include various parameters that will enable the Bureau and Cooperator to select the best operating conditions for injecting and recycling leaching solutions during the field test.
4) Geologic evaluations of on-site locations related to leaching characteristics.

Bureau personnel have been working with the Cooperator at the site collecting data since field activities began.

Question: How much funding would be required in FY 1990 to fully continue the laboratory research efforts that would be conducted in support of the purposes of this project? What would be accomplished with this funding in FY 1990?

Answer: Approximately $750,000 is required to continue the in-house activities listed in the preceding answer. By the end of FY 1990, the Bureau expects to complete most of the testing and evaluation necessary to allow the Cooperator to proceed with on-site construction activities.

Question: It is my understanding that the University of Arizona, through the College of Engineering and Mining, could provide some research assistance to the laboratory program through its graduate studies program. Have these possibilities been explored? What arrangements, if any, are being considered for FY 1989? FY 1990?

Answer: We have carefully reviewed the potential participation of graduate students in the laboratory program. Owing to the relatively short duration of remaining laboratory studies, it is felt that their participation in the project at this point would not be timely. The Bureau maintains continuous contact with staff at the University of Arizona and receives valuable assistance from them in its in situ leaching research program.

QUESTIONS SUBMITTED BY SENATOR BUMPERS

Question: The FY 1988 and FY 1989 Interior Appropriations Acts have provided the Bureau of Mines with a total of $450,000.00 for a study to be conducted by the Soil Conservation Service in Arkansas on identifying plant species that are best adapted to reclamation of abandoned mine lands. The study is intended to be a five year effort. What has been the progress of that study to date?

Answer: The Soil Conservation Service (SCS) is proceeding with a work program developed in concert with Bureau of Mines. The program calls for the staged evaluation of six different methods of soil restoration. The first method is being tested now. A fall planting for forage grasses was made in October 1988. In addition, the SCS is carrying out the administrative and technical steps essential to the program. They have spent significant effort this first year in working with the professional staff at Arkansas Technical University, identifying and selecting a number of test sites, determining the plants to be tested, and obtaining the plants or seeds when they are not routinely available.

A planning meeting was held February 6 and 7 in Minneapolis between SCS and the Bureau to finalize the second year program. Full implementation of the six site program will require a five-year period, because vegetation studies take adequate time after planting for evaluation of success of the soil restoration program. The contract modification to formalize the use of the second year funding is being prepared now. It is expected to be in place by May 2.

Question: Has the Bureau of Mines met with SCS and Arkansas Tech University to develop a memorandum of understanding and a plan of works for the project? Is the Bureau satisfied with that MOU and plan?

Answer: The Bureau of Mines and SCS have signed a Memorandum of Understanding and the transfer of funds took place under an Interagency Agreement signed in September 1988. The SCS is negotiating a contract with Arkansas Technical University to provide for continuing technical assistance. The Bureau is satisfied with the work program, the MOU, and the performance of the work to date.

Question: The continuation of this project was not included in your FY 1990 budget request. I understand that the Bureau was directed not to carry forward any Congressionally earmarked projects into FY 1990. Is it fair to say that this is the reason funding was discontinued to the BOM/SCS revegetation study?

Answer: In this period of scarce resources, the Bureau has not requested any funding for research in revegetation of coal mine spoil.

Question: The revegetation study involves both fall and spring plantings over a five year period to test different species of plants for reclamation work. Can useful information be derived from one or two seasons of plantings or would it be more useful to have information based on the full five years schedule of plantings?

Answer: Useful information can be obtained from one or two seasons of planting, but only short-term information on initial establishment and coverage. Vegetation and soil amendments may be effective for a few years and then disappear for many possible reasons. Long-term monitoring of vegetation is necessary to determine what treatments are effective in establishing permanent ground cover and site stabilization with the least amount of maintenance necessary over the life of the site. Plant succession is an additional factor which must be considered in reclamation, and this can only be done over the long term. Five years is the minimum for grasses and herbaceous species. Trees and other woody species require longer to evaluate.

Question: Will $250,000 a year for the next three years be adequate funding to carry out the plan and MOU developed by the Bureau with SCS and Arkansas Tech?

Answer: The full implementation of the program is scoped at approximately $250,000 per year, but the research has been designed such that partial results can be obtained after one or two years. The program is flexible in that the Bureau and SCS can obtain useful information should funding terminate in FY 1989.

SUBCOMMITTEE RECESS

Chairman BYRD. Thank you.

The subcommittee will stand in recess.

[Whereupon, at 1:40 p.m., Monday, February 6, the subcommittee was recessed, to reconvene at 10 a.m., Thursday, February 9.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

THURSDAY, FEBRUARY 9, 1989

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Harry M. Reid presiding.

Present: Senators Leahy, Burdick, Reid, and Domenici.

Also present: Senators Wirth and Heflin.

NONDEPARTMENTAL WITNESSES

Senator REID. The subcommittee will come to order. This is the time scheduled for the Department of the Interior and Related Agencies Subcommittee to receive testimony from non-Federal witnesses on programs under this subcommittee's jurisdiction.

First of all I would like to request that any witnesses who have not previously provided copies of the testimony they will be giving this morning to come forward now and provide three copies to the subcommittee staff.

The procedure for the hearing today is that we will begin taking testimony in a few minutes, and are scheduled to take testimony until sometime early this afternoon. We hope we can finish by 2 or 2:30. We don't know if we will have a Senator here after 1:15. Consequently, we are going to try to hurry things along as much as possible.

A list of witnesses and their scheduled times of appearances is posted on the outside hearing room door. Because we have a full schedule, we will limit each witness to 5 minutes. When the yellow light on the dais in front of me goes on, that means that you have to begin wrapping up your testimony; and when the red light comes on, which will be shortly thereafter, you are expected to conclude your testimony.

We must adhere to these time limits if we are going to stay on schedule and receive testimony from about 50 witnesses today. It's going to be a long day, and the subcommittee will need and appreciate each person's cooperation.

The written testimony submitted by each witness will be retained in the subcommittee files. Therefore, I would recommend that each witness summarize his written remarks rather than simply reading the statement in the record. The summary will permit you to tell us in your own words what concerns you have and would also permit, if appropriate, questions from the subcommittee members.

Our time constraints won't permit us to take oral testimony from witnesses who are not on the published list. Anyone, however, wishing to submit a written statement for the subcommittee may do so. Such statements must be single-spaced and limited to no more than three pages. Written statements must be received by the subcommittee no later than March 31 of this year.

Now, as I call each witness, would you come forward, take your place at the witness table and begin your testimony by indicating your name and organizational affiliation.

STATEMENT OF HON. JOHN MELCHER ON BEHALF OF THE HUMANE SOCIETY OF THE UNITED STATES

Senator **Reid**. The first witness today is going to be Senator John Melcher.

Senator Melcher, welcome.

Senator **Melcher**. Thank you very much, Mr. Chairman.

I have prepared testimony, and I will read it right now. I have just a moment or two of comments to make after that.

I would like to thank the subcommittee for the opportunity to appear today. I am testifying on behalf of the Humane Society of the United States and the Society for Animal Protective Legislation. I would like to endorse the attached testimony presented before this subcommittee by the Humane Society and the Society for Animal Protective Legislation.

More funds are urgently needed for the Division of Law Enforcement of the U.S. Fish and Wildlife Service so that we can implement a wide range of legislation, including both the new humane transport regulations that became effective last year and the Elephant Conservation Act we passed in the last Congress.

No new law enforcement funds have been added in the fiscal year 1989, and the $4.25 million to add inspectors and agents is needed immediately, right now.

I do not want to use the subcommittee's time repeating the attached testimony, but I feel compelled to inform you of the perilous state of the immediate plight of the African elephant and how Congress can help.

While the subcommittee knows much of the history of the Elephant Conservation Act, some additional explanation may be helpful. This is the act that was just passed last year. In order to implement, it depends upon law enforcement personnel. The provisions that require that are these:

No ivory can be imported into the United States from a country that is not signatory to the convention on international trade in endangered species, and the U.S. Fish and Wildlife Service must determine whether each of the 33 ivory-producing nations in Africa have a valid conservation program. If they do not, they will not be able to export ivory to the United States.

As a result of this law, inspectors and agents must determine whether the ivory jewelry and carvings in each shipment originated in 1 of the 96 CITES signatory nations in a country without a moratorium or from 1 of the 79 nonsignatory nations.

The attached 7 pages of elephant product shipments from the 1986 Convention on International Trade on Endangered Species [CITES] report illustrates just how great a law enforcement responsibility these inspectors have at all designated ports of entry. The illegal killing of African elephants for their ivory has increased significantly since the legislation passed last year. Just 10 years ago the Fish and Wildlife Service found that there were at least 1.3 million elephants in Africa. In 1987, the population estimate was reduced to 764,000. That's about a 40-percent decrease.

Recent field research in central and West Africa puts the total population at closer to 400,000. With this rate, with more than 7,000 elephants killed every month, the African elephant could be almost extinct in 5 years.

As the African elephant becomes rarer, the value of the ivory on the remaining live elephants will increase. Ivory is now worth more than $150 a kilo. And this rapidly rising price has contributed to the increased slaughter of elephants.

There is an irresistible temptation for organized crime syndicates to get involved. Every year more than 90,000 reported wildlife shipments of skins, ivory, wild birds and so forth enter and leave the United States, of which the Fish and Wildlife Service is able to inspect fewer than 20 percent. There are only 60 law enforcement inspectors nationwide to deal with all of this, the same number that there were 5 years ago. Unless Congress funds further enforcement, the division of law enforcement cannot handle responsibilities which are needed to adequately implement existing legislation, including CITES, the Endangered Species Act, the Lacey Act, and the new Elephant Conservation Act which we passed just last year.

Real protection for African elephants is heavily dependent upon efforts within consuming nations like ours. CITES instituted an ivory quota control system that went into effect January 1986. It was designed to set export quotas and control the ivory export trade.

Unfortunately, as was described in House oversight hearings last summer, the entire ivory quota system is a dismal failure. The Fish and Wildlife Service division of law enforcement is simply unable to enforce existing CITES provisions. How can they then be expected to enforce any new measures, regardless of how pressing the problem may be? More than 90 percent of the ivory entering the United States comes in as worked ivory, jewelry and trinkets from Hong Kong. Importers in Asia buy raw ivory from Africa with no regard to where it came from nor how it was obtained.

Scientists have estimated that in 1986, the first year of the quota system, 78 percent of all ivory traded worldwide was poached ivory, and this trade was operating totally outside of the CITES system. This represents the tusks of approximately 89,000 elephants in 1 year.

In conclusion the Elephant Conservation Act was a step in the right direction, but in the 8 months since hearings were held on that legislation, the crisis has reached such a crisis level that we have only two choices: provide ample enforcement personnel to carefully track the source of every single ivory shipment or completely ban United States ivory imports either through legislation or an emergency listing of the elephant as an endangered species. Without such action, we could be sealing the fate of the African elephant.

Now, Mr. Chairman, I just want to briefly summarize this and point to a provision in our law that would permit us to act very promptly and perhaps save some money. I think it would very likely save some money on the inspection.

First of all, the Convention on International Trade on Endangered Species, occurred in the late 1970's. We were the country that set it up. In fact, other countries call it the "Washington convention on endangered species," in international trade.

Out of that grew the banning or declaring as endangered species Asian elephants. So, that part of the world and the elephants contained therein has already been placed on the endangered species list by our Secretary of the Interior. There is a procedure that is gaining headway. It takes about 1 year to place African elephants on the endangered species list.

However, to act immediately, our Secretary of the Interior is empowered to make such an emergency declaration. If that were done, then ivory imports into this country from African elephants would be banned. That may be the wisest step. It is suggested that our new Secretary of the Interior review this. I think they will to see whether or not they want to take such a step immediately.

But if it isn't on the endangered species list, then it means that the ivory coming into this country should be inspected. Our law now requires that under the Elephant Conservation Act. It places a burden on the law enforcement division of the Fish and Wildlife Service which would cost about $4.5 million to $5 million this year and perhaps most years after that. But we can perhaps cut down on what funding is necessary if the Secretary would act immediately. And I suggest that to you, Mr. Chairman, and Senator Domenici, as perhaps the wisest thing to do at this time.

Senator Reid. Senator Melcher, I really appreciate your testimony.

I can't imagine there being 100,000 or so elephants poached each year just to satisfy the jewelry business in one tiny little country, and that only takes into consideration what goes on in Hong Kong. It's testimony I would rather not have heard. It is something that I will remember, and I will proceed to do something about this. I wish I could say something more illustrative of my feelings, but I think that is about all I can say.

Senator Melcher. Well, thank you, Mr. Chairman.

I would like to attach to my testimony a testimony in support of an increase in funding for law enforcement division of the Fish and Wildlife Service, from Christine Stevens, who is the secretary for the Society for Animal Protective Legislation.

And I would like to leave with you the two articles by perhaps the leading expert on African elephants, Ian Douglas Hamilton. One of them is in March and April 1988. And the article in January 1987 by the same author.

Senator Reid. Thank you very much, Senator Melcher.

Senator Melcher. Thank you very much.

Senator **Domenici**. Senator Melcher, I have no questions. Let me just welcome you and say personally how good it is to see you. It's a pleasure to have you here with us.

Senator **Melcher**. Thank you very much, Senator.

STATEMENT OF RICHARD A. BAJURA, DIRECTOR, ENERGY AND WATER RESEARCH CENTER, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV.

ACCOMPANIED BY GEORGE FUMICH, CONSULTANT, ENERGY AND WATER RESEARCH CENTER, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV.

Senator **Reid**. For those of you who are going to testify now, we are going to hold you to the 5-minute rule. The first witness always gets a little break. But we are going to start operating on the machine now.

We would ask Richard Bajura and George Fumich to come forward, from the Energy and Water Research Center, West Virginia University, Morgantown, WV.

Please proceed.

Mr. **Bajura**. Good morning, Senator Reid, Senator Domenici.

My name is Richard Bajura. I am the director of the Energy and Water Research Center at West Virginia University. I am accompanied by George Fumich, a consultant to our program.

This morning, as chairman of the National Association of Mineral Institute Directors, I will offer testimony regarding the Mineral Research Institute Program and also some of our own personal comments.

First, I wish to thank Congress for their interest over the past year in reauthorizing the Mineral Research Institutes. During this period we have had a lot of discussions with industry, among ourselves. We are working with the bureau to integrate the university and the bureau research programs. We are working to get more industry involvement in the mineral programs. We believe that we have to provide quality results for what we are doing, and we agree that we should stand for review.

We have been working with the generic centers program. There are currently four centers supported under this research allotment program now. We are preparing a report on how these centers should be evaluated, reviewed, managed, and planning for new centers.

It is our recommendation that a new center be established this fiscal year and for the next 2 fiscal years so that we have a total of seven centers in all, and we believe that research funding at the level of $1 million per center is what is required to make us competitive.

On the allotment portion of the program we are recommending funding at a level of $225,000 per institute, and we would ask Congress to pay attention to the situation in our minerals industry now where we are losing students. They are not enrolling in the program, and we ask of this funding that $50,000 be set aside for fellowships so that we can continue to educate our mineral technologists of the future.

I think Congress should have a report card from what we are doing with our money. We would like share with you some of the results that we are getting on two centers, the respirable dust center. We currently have a program under way now where we are looking at ways that we can administer an inhibitor to a person who has been exposed to respirable dust and perhaps mitigate the effects after exposure.

We recognize that diesel exhaust in mines is a serious hazard, and we have instituted a program with four of our universities to address this problem.

In supplemental testimony today we have included letters from the European Economic Commission attesting to the state-of-the-art level of our work in the respirable dust program. We are recommending funding at $2.5 million next year, as we have had in the past, and we appreciate your support.

Another project I would like to talk about is the mine land reclamation center program. Now, this program was just started, and we are only in our first year, but we have developed a program with industry where we're looking at addressing the problem of acid mine drainage and using phosphates to eliminate this effect.

In our first year, we have contributed over 70 percent as a cost-sharing match to the Federal funding. We believe that this is a major problem facing our country right now, and in following our original plan that we have proposed, we are recommending funding at $3.5 million for next year.

Mr. Chairman, we have been working with the Bureau—and in my saying we, I mean the Mineral Institute Program—we have developed liaison representatives between the Bureau and the individual projects on the generic centers program. We have had discussions with the Bureau on how the centers should be operated and managed. We've developed good relationships with the field center directors, and we have good working relationships with the people in the Washington research office.

We like the way Mr. Ayre, the director of the Bureau, is working with the program, and we think he is doing a good job. We would like to give him a vote of confidence.

In short, I think we have some good things going with the universities, with the Bureau. We believe the Bureau has some good research programs going. We believe they need stable support for their programs.

We are concerned that the Bureau's budget recommendation for this year is cut by almost 30 percent in the two areas that we been addressing, and we would ask that at least for next year their funding allocation be the same as it was this year.

This concludes my testimony, Mr. Chairman. I would like to acknowledge that in the audience Mr. Don Warner, the director of the NASLGIC committee, is present with us to provide supplementary information on the Mineral Institutes Program.

Thank you.

Senator REID. Being from Nevada and having as much mining as we have, I listened with interest to your testimony.

Senator, do you have any questions?

Senator DOMENICI. Just one. I forgot, if I knew, where are the four centers?

Mr. BAJURA. One center is in Nevada, one is in Missouri, one is in Virginia, and the fourth center is in Utah.

Senator **Domenici**. The resources, aside from Federal money, are there resources allocated to this program from other sources, or is that it?

Mr. **Bajura**. The generic centers program is funded pretty much by the Bureau of Mines allocation.

In the Mineral Research Institute Program, we have the 2-for-1 match. So, with the $7 million we are recommending for the Senate, that would be a total program of $21 million when we put the 2-for-1 match in. And that match comes from the universities, from industry; it comes from many sources.

Senator **Domenici**. Is there coordination between the four centers as to what kind of research they're doing?

Mr. **Bajura**. Each center has its own particular area of interest, Senator Domenici. What I have learned in my experience as codirector of the Respirable Dust Center is that we have to go through a learning process to get the schools together, and I think we have to work with the Bureau. And this is one of the things that I am seeing happen now.

The Bureau is sending its top-line people to sit on these review panels, and I think we're able to communicate, we're able to set programs, and I am looking forward to this year of working with the Mineral Institute directors to come up with a good plan that would help us get much more than we have out of the centers.

Senator **Domenici**. But it's too early then to give us a quick inventory of what each center does? You need a little more time, as you see it; is that right?

Mr. **Bajura**. Well, I think we could give you an inventory as to what each center does and what its major accomplishments are. I believe another thing we should be getting for you is a future look, where are we headed in the future. I know we have a review schedule by 1992 that will review each center.

If you're interested, we can work with the center directors and provide a report to you on what we're doing. That is one of my objectives as chairman of the group this year is to get our program together and to provide these recommendations as to how we can operate more effectively.

Senator **Domenici**. Thank you very much.

Thank you, Mr. Chairman.

Senator **Reid**. Thank you very much for your testimony.

STATEMENT OF JIM WELSHONCE, CHAIRMAN, WEST VIRGINIA STATE LEGISLATION COMMITTEE

Senator **Reid**. Our next witness is the representative of the American Association of Retired People to testify about weatherization, among other things.

Would you be kind enough to state your names? We don't have those on our list of witnesses.

Mr. **Welshonce**. Mr. Chairman, my name is Jim Welshonce—another West Virginian—and I am chairman of the West Virginia State Legislative Committee of the American Association of Retired Persons.

On behalf of AARP, I want to thank you for this opportunity to testify on fiscal year 1990 appropriations for the Department of——

Senator **Reid**. Senator Domenici, do you know why we are having so many West Virginia witnesses?

Senator **Domenici**. I have no idea. [Laughter.]

Senator **Reid**. I don't either.

Mr. **Welshonce**. I can't imagine. [Laughter.]

I want to thank you for this opportunity to testify on fiscal year 1990 appropriations for the Department of Energy's Weatherization Assistance Program. This program is currently funded at $161 million.

AARP supports a fiscal year 1990 funding level for the weatherization program of $200 million, the same amount contained in companion reauthorization bills recently introduced by Representative Sharp and Senator Metzenbaum. This figure restores funds to slightly above what the program received at its peak in 1985, which was $191 million, and recognizes that supplemental resources of the low-income home energy assistance oil overcharge funds previously available to the program are rapidly drying up.

Low-income families spend a higher proportion of their income for home heating and cooling than higher-income families. This is especially true of low-income older people, who tend to live in old, poorly insulated dwellings that require repair or rehabilitation. The weatherization program has made a crucial difference for many of these older households in lowering energy cost burdens.

Despite funding reductions since 1985, the weatherization assistance program has been able to maintain a strong momentum because of State support through the Low-Income Home Energy Assistance Program and State-allocated oil overcharge funds. Unfortunately, however, these resources are now dwindling. Drastic cuts in the energy assistance block grant precipitated a 22-percent drop in the use of LIHEAP funds for weatherization activity to $172.5 million in fiscal year 1988. Likewise, the availability of oil overcharge funds is on the wane.

A telephone study of State energy officials conducted by the National Consumer Law Center September through November of 1988 revealed that of the roughly $3 billion in Exxon and stripper well funds received by the States, 93 percent had already been allocated. Any future oil overcharge funds awarded to the States are likely to come in much smaller numbers and be disbursed over extended periods of time, say 5 to 8 years.

Thus, the major sources of alternative funding for weatherization activity can no longer be relied upon by the States. The Department of Energy price projections for the next decade, however, suggest that energy costs for low-income households will not decrease much below current levels. This leaves a very large number of low-income households who are spending too high a proportion of their incomes on energy. Strengthened funding of the Weatherization Assistance Program can help reduce this cost burden and promote conservation.

In conclusion, AARP urges the subcommittee to evaluate appropriations for the weatherization assistance program in light of the shrinking pool of resources available to fund this important activity. From this standpoint, we urge you to support an fiscal year 1990 funding level of $200 million for the weatherization assistance program. We thank you for your past support of this program and look forward to working with you to ensure its continued success in serving low-income people.

Senator **Reid**. You know, one of the things you haven't spoken of—and I remember this debate, now, 6 years ago—that it creates a lot of jobs, this Weatherization Program. People have to install the weatherization products.

Mr. **Welshonce**. Indeed it does.

Senator **Reid**. And it does stimulate a lot of employment.

Senator Domenici, do you have anything?

Senator **Domenici**. I was just going to ask, based on your observation of the program, if there are any quick recommendations you have as to ways to improve the Weatherization Program?

Mr. **Welshonce**. I would like for Mr. White, who is our staff person who knows more of the detail, to respond.

Senator **Reid**. There is a microphone right there.

Mr. **White**. My name is Larry White. I am a legislative representative for the American Association of Retired Persons.

Senator, there are a number of ways that the program can be improved besides increasing funding. It can be better coordinated with a lot of other State programs that not only employ youths but also retired seniors who are experts and tradesmen in these areas. In addition, they can also be used to complement existing job creation programs and job training programs.

Senator **Reid**. Thank you.

Senator **Domenici**. Thank you very much.

Mr. **Welshonce**. Thank you.

STATEMENT OF DR. F. WILLIAM KIRSCH, VICE PRESIDENT, INDUSTRIAL TECHNOLOGY AND ENERGY MANAGEMENT, PHILADELPHIA, PA.

Senator **Reid**. The next witness we have to appear before us is Dr. F. William Kirsch, vice president, Industrial Technology and Energy Management, from Philadelphia, PA.

Would you please proceed with your testimony.

Mr. **Kirsch**. Thank you, Senator. I would like to thank the subcommittee for this opportunity to speak on behalf of energy conservation and particularly energy conservation among small- and medium-size manufacturers.

I am William Kirsch, as you said. I direct something known as the Energy Analysis and Diagnostic Center Program, or EADC Program. It is an industrial conservation program dealing with small and medium-size manufacturers, supported currently by the Department of Energy at a rate of about $1.6 million per year.

The program has generated over 82 trillion Btu's per year in energy conservation. That is kind of hard to picture, but it does add up to more than $400 million per year in savings during 12 years, for about 2,500 small- and medium-size manufacturers.

We know also that from one year to another, one-half to three-quarters of the energy-conserving and cost-saving potential has been implemented by these manufacturers. What I am asking is for the Congress to continue support of the program which for over 12 years has really been generating far more dollars for the Federal Government than it has cost.

However, without continued Federal support, the kind of support which is truly seed moneys, the EADC's cannot survive. Let me explain why:

The program has two chief goals. The first is to help small- and medium-size manufacturers to become or remain competitive by reducing their energy costs through more efficient manufacturing operations;

The second is to offer engineering graduate and undergraduate students opportunities to gain practical experience as part of their education and also be paid for it.

To fulfill these goals, university engineering faculty and students perform onsite analyses in the plants analyzing manufacturing operations and their energy use. They make very specific recommendations and formal written reports, and my staff and I review all of these reports and verify their results ourselves through interviews that we conduct in person with roughly two-thirds of the manufacturers that have been served.

Furthermore, we require these same faculty to find out later how much of what they have recommended has been implemented. For example, during 1988 my staff and I interviewed 243 of these manufacturers. These are some of the comments:

The EDAC Program is a good expenditure of taxpayers' money—94 percent agreement. We have seen that over the years vary between 90 and 98 percent;

Audit reports are considered extremely well done—93 percent;

Manufacturers agree with all or most of the conclusions expressed—88 percent;

Manufacturers are implementing at least some energy-conserving and cost-saving recommendations—94 percent.

In our managerial role in the program—and we are very active managers—we know how much of the manufacturer's energy-conserving and cost-savings potential is implemented. We also know the dollar value of their savings, and we can estimate its taxable value as incremental earnings to the Federal Government. That is why we confidently claim that the Federal Government's earnings are indeed several times as large as the total cost for the EADC Program.

EADC's have become important links in the application of energy and manufacturing technology, old as well as new. The EADC's have become vital factors to improve the competitiveness of the manufacturers they have been able to serve. But very much still remains to be done. With Federal support for the kinds of assistance which EADC's provide, the Nation's small- and medium-size manufacturers will be able to compete, to earn a profit and stay in business, to purchase and sell goods and services, and to strengthen the Nation's economy.

And I ask you to provide this much-needed support. And at the present time we are seeking approximately $1.8 million for the next fiscal year.

That concludes my formal testimony.

Senator Reid. Would you be kind enough to give me an example or two of some of the savings that have been suggested at various manufacturing facilities?

Mr. Kirsch. Do you mean of the kinds of measures?

Senator **Reid**. Yes.

Mr. **Kirsch**. OK. For example, recovering heat from a flue, meaning it may be a boiler, it may be a high-temperature furnace; recovering heat from a process vessel and reutilizing that heat in the process; changing the air-fuel ratio to improve combustion; using other forms of heat recovery. These are very specific kinds of things. There are several hundred of them, but those are types of things.

Senator **Reid**. Because the figures you have here are quite dramatic.

Mr. **Kirsch**. We think they are, too. But I am biased.

Senator **Reid**. It is supported by the Department of Energy at a current rate of $1.6 million a year.

Mr. **Kirsch**. Yes, sir.

Senator **Reid**. Now, how long has this program been in effect?

Mr. **Kirsch**. Twelve years, since 1976. We began in the Department of Commerce that long ago.

Senator **Reid**. During that period of time you have saved $400 million a year?

Mr. **Kirsch**. It has now reached that level. Not every year since then, but the savings at the present time have reached the level of $400 million per year if you add up what has been saved over the 12 years.

Senator **Reid**. But it's not a total of $400 million, it's $400 million a year.

Mr. **Kirsch**. At this time.

Senator **Reid**. Yes.

Mr. **Kirsch**. That's right.

Senator **Reid**. Well, then it seems that some of the suggestions made are relatively simple suggestions, most of the time.

Mr. **Kirsch**. Many times they are. Sometimes they do involve heat pumps. Sometimes they involve cogeneration. We find the opportunity—cogeneration would be a typical one, but that is a very specialized case. Do we recommend them? Yes.

Senator **Reid**. Cogeneration? Tell me what you mean.

Mr. **Kirsch**. Simultaneous generation of heat and power. In other words, out of the same fuel source we are able to get both heat and use some of it also to generate electricity.

Our savings, incidentally on this, we figure, if you want a rough figure on a year-to-year basis that the Federal Government, if we look at taxable earnings at the rate of like 25 percent, we find that roughly the Federal Government is recovering $2 to $3 for every dollar that goes into the program. These are based on implemented numbers, not just what we recommend.

Senator **Domenici**. Mr. Kirsch, obviously somebody, some entity must spend money in order to carry out your recommendations.

Mr. **Kirsch**. Yes.

Senator **Domenici**. So that for the marketplace it's not your $1.2 million or whatever the marketplace invests to carry it out. How much do you think is invested to achieve these energy savings, and how much of that is Government money?

Mr. **Kirsch**. What is invested to carry it out, I would say, is zero Government dollars. They are all done by the manufacturers, and our estimates over the years look like they're somewhere between

$5 and $10 that the private sector spends to implement for every Federal dollar that goes into the program.

Senator Domenici. Thank you, Mr. Chairman.

Senator Reid. Thank you very much.

Mr. Kirsch. Thank you, sir.

STATEMENT OF BRUCE GOLDWATER, VICE PRESIDENT AND GENERAL MANAGER, MECHANICAL TECHNOLOGY, INC.

Senator Reid. The next testimony is on something that we are familiar with, Stirling Engine Program.

Mr. Bruce Goldwater?

Mr. Goldwater. Good morning, Mr. Chairman, Senator.

I am Bruce Goldwater, from Mechanical Technology, Inc., and I am here again to brief you on the Stirling Engine Program. I want to thank Congress certainly for establishing the United States as a world leader in the Stirling technology activities.

I think you have made the right decision. We are seeing interest far beyond what we expected to see when we started the program back in 1978. Today we are seeing strong interest beyond the automotive side, which of course the heat engine bill had demanded. We are working with fleet users on specialty vehicles and the gas industry in gas-fired heat equipment.

Also, we are seeing Government interest, very strong from NASA for the space power program, and we are starting to see strong interest from the Navy in undersea propulsion and auxiliary power needs.

Let me give you a brief status of where we are. We are concluding the original intent of the program and are delivering as promised. We expect the vehicle that we have finally settled on to be delivered to the post office in the next few months, and they will then conduct a 6-month program.

And we expect that all of the goals of the program will be met. Efficiency has been achieved. Power has been achieved. And it is truly the only program that has been successful in meeting the original intent of the heat engine bill.

What is most exciting, however, has been the emission results that we have attained. This was a secondary goal when the program was first started. As you remember, it was an energy conservation activity. However, we are finding today the interest in the clean output from this engine is receiving a tremendous amount of interest. The data that we have taken out in Denver has confirmed that the carbon monoxide emissions are one-half of the level being produced by the internal combustion engine.

The cold-temperature data, which of course is a significant problem in Denver, is at one-third the levels of the internal combustion engine. And the people out in Colorado are pushing very hard for continued work in the Stirling engine.

What are we doing to commercialize this technology, which of course has been the original intent of the program? We at MTI have hired a number of people to attempt to develop private venture funding to take it to the manufacturing stage.

We are also continuing to work with the end user to develop support for the need. We think that is a very critical part of our program such that we can attract the American industry manufacturer to make the engine. And this has not been an easy task.

The end users that we have been working with have been the Air Force. We have had a truck at four locations in the Air Force. That vehicle has achieved about 18,000 miles. Extremely high availability, somewhere near 94 percent. The post office will receive the vehicle, as I mentioned previously. And the gas industry is very interested in receiving demonstration-type units.

The next step we have to go through is to introduce a number of these engines, multiple units to the fleet owners and to the industry who are interested in using it.

American industry, however, is still reluctant to go ahead, and we still need the encouragement of the Government, we believe. We are asking this committee to encourage the Department of Energy to continue to support Stirling technology. And there is precedent for that. They have supported the turbine and the diesel technology for many, many years.

Transfer of this technology was very expensive. We brought this from Europe. The Japanese industry is pursuing the technology. We think it is a serious mistake if we drop it at this point. It would be yet another technology in which the Japanese have taken the lead, and we believe that American jobs will then be lost.

I would like to conclude by saying that I want to thank this committee once again for allowing me to come here and tell our story and to tell the results of a very, very successful program.

Thank you.

Senator REID. Thank you.

I have taken a ride in the Stirling. Tom Harkin is the man who has been offering rides in the Stirling to people. [Laughter.]

Mr. GOLDWATER. That's right.

Senator REID. I am interested in this. You indicated how the Air Force is interested in this. You also said there is interest beyond automotive, and I guess what you meant by that is some of the interest that NASA has shown.

Anything else?

Mr. GOLDWATER. Yes; as I mentioned, the use of the engine rather than a passenger car——

Senator REID. I understand that. But you mentioned NASA. Is there any other agency or group of people?

Mr. GOLDWATER. As I mentioned, the Navy is also interested in the engine for special applications in undersea. The gas industry is also very interested in it as a stationary powerplant for heat pumps, chillers, cogeneration, applications such as that.

Senator REID. You know, each year that I have been in Congress, going on 7 years now, the Stirling each year is the last year you need Government help, that you're almost there, and "give us 1 more year and we'll have it made."

What are you telling us now?

Mr. GOLDWATER. Well, what I am saying today is that we have concluded the program as originally intended. We are delivering the vehicle. As I said, we're delivering that to the post office. And we are not here to ask Congress to put money into the program directly.

We are asking that Congress encourage the Department of Energy to keep Stirling in their long-term plans, to continue the technology development such that we can stay ahead of the competition that is coming from abroad, such that when the American industry finally does in fact pick it up, that we will have retained that leadership.

Senator **Reid**. Well, but you are asking for more money. At least your testimony here says—let's read it here——

> While we are diligently pursuing many funding alternatives for this next step, we feel that the Department of Energy, encouraged by the success of this program, should support the maintenance of the U.S. leadership in Stirling. A program of $2.5 million per year is an appropriate level.

Mr. **Goldwater**. Mr. Chairman, I guess what I am saying there is that for the years, I guess, starting in 1981, the Department of Energy has never put money into the program in their budget. That initiative has always come from Congress. It was their far-sighted view that this was an important technology. And we have appreciated that support. We think it was a right decision.

We are not asking Congress to add into the budget any money this year. What we are saying is that we feel strongly and we will continue to work with DOE to try to convince them that it is the right thing for them to do.

Senator **Reid**. Senator Domenici?

Senator **Domenici**. I would ask you one question: How much money have we spent on the Stirling Program?

Mr. **Goldwater**. The Stirling Engine Program that has been sponsored by the Government is $110 million.

Senator **Domenici**. You say you have completed your assignment.

Mr. **Goldwater**. Yes.

Senator **Domenici**. But essentially, when we started it, we really wanted to have an alternate engine that was usable, and we really had in mind transportation usage.

Mr. **Goldwater**. Correct.

Senator **Domenici**. Of course, that was the big problem during the energy crisis.

Mr. **Goldwater**. That's right.

Senator **Domenici**. We haven't accomplished that mission?

Mr. **Goldwater**. We have not introduced it into the American marketplace. That's correct.

Senator **Domenici**. Are you still telling us that you believe that's going to happen?

Mr. **Goldwater**. Well, I believe that the energy crisis will come back on us. I think I am not alone certainly in that opinion.

Senator **Domenici**. Yes.

Mr. **Goldwater**. We believe that when that occurs, the American industry is going to be caught short again and that an alternative engine will be looked at. And I think we have provided that alternative, which I guess was the original intent of the program—to have an alternative in the event that it was needed. And therefore, I would say that that has been accomplished.

Senator **Domenici**. Just one last question, Mr. Chairman.

Are you suggesting then that if the price of transportation energy gets high enough, Stirling is already a technology and an engine that would be used?

Mr. **Goldwater**. It's a technology that can be——

Senator **Domenici**. No; would be, is it price alone that would force it onto the market, the price of fuel?

Mr. **Goldwater**. The price of fuel. Yes; I believe so. And of course, the strong emission requirements that are being imposed on the automotive industry and will be imposed on industry in general, both vehicular and stationary.

Senator **Domenici**. Thank you, Mr. Chairman.

Senator **Reid**. Thank you for your testimony.

Mr. **Goldwater**. Thank you very much.

STATEMENT OF JAMES M. TUTT, PRESIDENT, CROWNPOINT INSTITUTE OF TECHNOLOGY, CROWNPOINT, NM.

ACCOMPANIED BY CARL TODACHENE, CHAIRMAN OF THE BOARD, CROWNPOINT INSTITUTE OF TECHNOLOGY

Senator **Reid**. Our next witness is James Tutt, from Crownpoint, NM.

Mr. Tutt, for my benefit, would you identify the person at the witness table with you?

Mr. **Tutt**. My name is James Tutt. I am the president of Crownpoint Institute of Technology. With me is Mr. Carl Todachene, the chairman of the board of Crownpoint Institute of Technology.

Senator **Reid**. Please proceed.

Mr. **Todachene**. Mr. Chairman, Senator Domenici, honorable Senators, my name is Carl Todachene. By the way, that's Navajo. It means "bitter water." I know it sounds right close to Domenici. [Laughter.]

I am the chairman of the board of directors of Crownpoint Institute of Technology, located in Crownpoint, NM. On behalf of our students and Navajo people as well, we want to express deep appreciation for this opportunity to testify. I know that time is very limited. I will try to make my comments very brief.

Crownpoint Institute of Technology is a fully accredited postsecondary vocational technical educational institution. It is fully licensed by the State of New Mexico and chartered by the Navajo Nation, with the five-member board of directors serving the Indian people.

Since its inception 10 years ago, Crownpoint Institute of Technology has graduated 1,165 students into the Nation's work force. Our graduates are earning between $8,000 and $20,000 in annual wages now. In 1 year alone, our graduates have paid over $460,000 in taxes aggregately.

Yet our institution remains the only tribally controlled educational institution in the Nation which is excluded from receiving any base of Federal operational support. The reason given is that we have been chartered by the Indian tribe which is very large. There is no other Indian educational institution in the Nation subjected to this exclusionary discrimination.

Crownpoint Institute of Technology is currently limping along under a 47-percent budget cut from the Navajo Nation and has lost one-third of its current programs moneys from the U.S. Department of Education through open competitions for soft money.

With that, I will now let Mr. James Tutt, the president of the Crownpoint Institute of Technology, to give you further details on the operation of Crownpoint Institute of Technology.

Thank you.

Mr. Tutt?

Mr. TUTT. Thank you, Mr. Chairman, and Senator Domenici, for giving me this opportunity to testify on behalf of our institution.

It has taken 10 years for CIT to evolve to what it is today, a fully accredited, perpetuating, chartered tribal educational system. There are only two other institutions in the Nation which are federally funded for base operation. The need of this institution is basically—it's not a college, it's not a postsecondary, it's not eligible for tribally controlled or secondary funding. CIT is not a member of the State system; therefore, it cannot get State funding for operation. CIT is not a tax-producing land, cannot get its levied moneys for its operation.

It took CIT 10 years to struggle to become what it is now. Indian vocational schools are not highly popular, but have a very important role that they play in economic development on the reservation and also create jobs off the reservation.

We have an outstanding achievement over the past 10 years I would like to mention here. Our retention rate is 88 percent, job placement, 80 percent.

What we are asking today is that there is a Federal trust responsibility to Indian education. Like Mr. Todachene said, we don't get enough funds from the tribe. We lost one-third of our program funds from soft money. We cannot plan for next year's students or programs because of these dilemmas. We cannot assure our instructors that want to continue. Our accreditation will be in jeopardy.

In conclusion, I would like to ask the committee to support the Crownpoint Institute of Technology to extend the Federal policy equitably as to the other tribal or other institutions, and appropriate $1.5 million for CIT's operation.

Thank you.

Senator REID. Could you tell me what you meant by the statement that these technical trade schools are not popular? In whose mind are they not popular?

Mr. TUTT. Around the State or school systems there is very little vocational education at the public schools. These are not very popular because it's basically a lot of students don't have the opportunity to get into that.

Senator REID. What are some of the trades that you teach at Crownpoint?

Mr. TUTT. Culinary arts, diesel mechanics, business and applied science. We have computer program, computer drafting, basic trade skills in carpentry, electrician, and plumbing.

Senator REID. Everything you've mentioned programs for, we have a shortage of personnel all over the country.

Senator Domenici?

Senator DOMENICI. Mr. Chairman, I very much appreciate the subcommittee's indulgence in having my two constituents testify today. I am not only familiar with CIT, but I am very impressed by its program, and have been very much involved in trying to keep it alive. We have succeeded in the past, with the help of this subcommittee, in accrediting their library with $500,000 for books and equipment, and we are currently working with EDA to refurbish CIT buildings that, although they were built not too many years ago, were built in an inferior manner. So, we are working to get the physical plant in order.

We are confronted with a situation where, if you follow existing funding patterns, the operations of the Crownpoint Institute of Technology won't be funded, and here they sit as one of the few successful vocational training institutes in Navajo country. If we wait for funding from the BIA, they're excluded for one reason or another. The tribe has its own problems and doesn't fund them enough.

So, I know when we ask the committee to fund this, we will receive that kind of an argument. But I submit that when you have something that is working for the Navajo nation, with 75 to 80 percent unemployment, that we ought to help. And I am going to try to do that.

Senator REID. Senator Domenici, if I could just interrupt, and pardon me for doing that. You know, the last several weeks we've received a lot of bad publicity about the Navajo tribe.

Senator DOMENICI. Right.

Senator REID. It's too bad that a program like this doesn't receive some of the attention of the media that some of these negative programs do, because I am a great believer in vocational education.

That's why I was interested in your remark that it isn't popular. And you're right, it really isn't popular because, people like Senator Domenici and myself, from the backgrounds we've come from, you know, it's the age where kids had to go to college, and we have found that people going to college isn't necessarily the right place to go, that many more of them should be going to the trade schools.

So, I think, Senator Domenici, maybe you've found a friend here with this program, and we will see what we can do to work on it.

Senator DOMENICI. Thank you very much.

I know that they struggle mightily, and I must tell you that I know about the program; I have been there a number of times. We have tried to get the attention of the Navajo nation. Actually, we had the chairman of the tribe out there about a year ago when these good people put on a positive promotional endeavor.

Senator REID. He was busy with other things.

Senator DOMENICI. We did remind him that they ought to spend money on this kind of program, that it was working. But we don't see the fruits of that, so we have to come up here. And I will do my best to justify it. And I thank you for your thoughts on it.

And I want to say thanks to both of you, Jim and Carl. I appreciate your being here.

Senator REID. Thank you very much.

Mr. TUTT. Thank you very much, gentlemen.

STATEMENT OF J. JACKSON WALTER, PRESIDENT, NATIONAL TRUST FOR HISTORIC PRESERVATION

Senator REID. The next witness before the subcommittee is J. Jackson Walter, president of the National Trust for Historic Preservation.

Mr. **Walter**. Thank you, Mr. Chairman. For the record, I am Jack Walter, the president of the National Trust for Historic Preservation.

I didn't realize it until I looked up in some records over the course of preparing to come up here, but you and I have a shared background in that while you were regulating the gambling industry in Nevada, I was head of parimutuel wagering for Governor Askew in Florida, and had the 1978 referendum passed in Florida, we would have been colleagues in that endeavor as well. It has persuaded me over the years that you meet strange folks on the back side of a race track, and I have spent some time in your State while you were in fact a commissioner there.

Senator **Reid**. Nice to see you.

Mr. **Walter**. It's nice to see you. That's hardly why we are here.

Our prepared testimony contains the details of the national trust's request for a fiscal year 1990 appropriation from the historic preservation fund for the National Trust for Historic Preservation, which is the congressionally chartered leader of the private sector historic preservation movement in this country. We will be celebrating our 40th anniversary this October.

Our request, which is for $8.5 million from the historic preservation fund, consists in three parts of $4.4 million for our ongoing operations—that is essentially level funding with an adjustment for the flexible freeze, as we are calling it; $1.6 million for the trust's ongoing and existing grant programs, augmented in a manner indicated in our testimony; and $2.5 million for a revolving loan assistance program for State and local groups, an initiative that was strongly endorsed 1 year ago by the House committees.

We also urge strongly appropriation of adequate funding for our partners in the national historic preservation program, particularly the National Conference of Historic Preservation Officers, the cultural and historic resources part of the National Park Service, the Advisory Council on Historic Preservation, the U.S. Committee for ICOMOS, and funding adequate to implement two 1988 amendments to the Archaeological Resources Protection Act.

Mr. Chairman, it is ironic that just as President Reagan was leaving office and sending up his eighth consecutive recommendation for zero funding from the national historic preservation fund, he gave a farewell address that closed with a stunning warning of the dangers inherent in what he referred to as an eradication of the American memory, ironic in the sense that the two statements—that is, zero funding from the historic preservation fund and the farewell warning took place within about 36 hours of each other.

Funds for our grant programs daily go to guard against those dangers inherent in the eradication of the American memory. Our extraordinarily cost-effective system of support for the local and statewide historic preservation movement might be exemplified with a small grant that we recently made in your State of $1,000 to the Preservation Association of Clark County, the purpose of which is to appraise the land surrounding the old Las Vegas Fort, which is to be added to the State park system this year, with legislation being introduced this month out there.

That is the oldest Anglo-American structure in southern Nevada. A small $1,000 grant from the trust's preservation services fund which we are asking for here is making possible an appropriate preparation of that legislation to the Nevada Legislature even virtually as we speak.

The national trust is growing. Our growth is self-financed. We have now more than 220,000 individual members. We raise more than 80 percent of our own operating budget. Our trustees have determined to increase this rate of growth, which is already at the level of better than 50 percent over the last 4 years.

Over these last couple of years we have brought to you a consistent set of appropriations requests based upon a very carefully established set of program priorities. We do that again. For your part, the Congress has responded to our requests over the past several years with a modest annual upward increment in funding and needless to say we strongly urge you to keep up that good record.

Thank you, Mr. Chairman.

Senator Reid. I am interested in the part of your written testimony which, among other things, says, "As Documented in American Memory," which is a publication:

> A recent study by Humanities Endowment Chair Lynne Cheney, the appreciation and understanding of our national identity and multiplicity of cultures has reached a low ebb.

How do you account for that? Why is that?

Mr. Walter. Well, certainly Lynne Cheney accounts for it in her book by a dramatic decrease in the level of the teaching of history in the public schools and a drop-off in the level of public awareness of the history of this country and, as it says here, of the multiplicity of cultures.

Certainly, the response of the trust to that, Mr. Chairman, is to try very, very hard to engage in what we are now calling heritage education as a major initiative across the country, involving the public schools, the now several thousand State and local organizational members of the trust, our publications, to try to raise that level and respond to Lynne Cheney's exceptionally good book. We are using it very much as the rallying cry against which we are trying to design what we think is a reasonably decent responsive grass-roots programmatic response.

Senator Reid. Thank you for your testimony.

Mr. Walter. Thank you, Mr. Chairman. I appreciate your time.

STATEMENT OF SAMUEL N. STOKES, TREASURER, U.S. INTERNATIONAL COUNCIL ON MONUMENTS AND SITES

Senator Reid. Our next witness will be Samuel Stokes from the U.S. International Council on Monuments and Sites [ICOMS].

Mr. Stokes. Good morning, Mr. Chairman. My name is Sam Stokes. I am the treasurer of U.S. ICOMOS and also a member of the board. With me this morning is Ellen DeLage, program officer for U.S. ICOMOS. Mrs. Morton, our president, cannot be with us today. She is in the Soviet Union arranging for our first historic preservation student exchange with the Soviet Union.

Senator Reid. The party that testified previously, you know, put in a plug for you.

Mr. Stokes. We are very glad to hear that.

Senator **Reid**. We urge you to provide funding for the United States Committee on International Council of Monuments and Sites. Is that—yes, the same one.

Mr. **Stokes**. I think one of the important things about the preservation movement in this country, Mr. Chairman, is that there is little competition between nonprofit organizations. There is a small number of organizations that work very effectively together and with the Federal agencies.

ICOMOS, for those of you who are not familiar with it, is an international intergovernmental organization bringing together people and institutions concerned with the preservation of buildings and sites of architectural and historic and archaeological significance throughout the world. There are 56 countries which have national committees.

The U.S. committee assures that preservationists in this country take full advantage of foreign experience and that American experience in preservation is taken advantage of throughout the world.

Mr. Chairman, the following are the principal points which we wish to make in our oral testimony this morning:

The United States, as represented by the National Park Service, should maintain an active role in international preservation organizations and programs. The Park Service was a major participant in the founding of ICOMOS and U.S. ICOMOS in 1965. It has been a member organization since its founding and has had professional employees serve as international officers and has contributed much to the work of ICOMOS technical committees.

The international world of historic preservation benefits substantially from our being able to share our experience in protecting our Nation's heritage. At the point where a record number of countries, now 106, have ratified the World Heritage Convention, including most recently the Soviet Union and the People's Republic of China, it is most inappropriate, in our opinion, for the National Park Service to substantially reduce its support of this convention within the United States.

The 1980 amendments to the 1966 National Historic Preservation Act call for the Park Service to have a leadership role in international preservation. We strongly agree. We should continue to nominate our national historic landmarks and National Park Service units to the world heritage list.

The world heritage list, maintained by UNESCO, is a listing of outstanding natural and cultural properties throughout the world which must be protected for all mankind.

We should make the convention and list better known and understood throughout the United States. We not only have much to share with the rest of the world, but also much to learn through such international commitment. We should be able to continue to provide professionally enriching internships, exchanges of personnel, and share publications.

Mr. Chairman, we are asking that $100,000 in additional funds be included in the Park Service fiscal 1990 budget to support three activities:

One, $35,000 for world heritage convention list;

Two, $35,000 for U.S. ICOMOS national and international programs conducted in cooperation with the Park Service; and

Three, $30,000 in dues for U.S. ICOMOS and ICOMOS.

Our written testimony details the activities which would be undertaken in each of these categories. I would mention a few examples of the activities we currently perform with the National Park Service and wish to continue in 1990:

Continue to prepare United States nominations to the world heritage list. We are ready to proceed with the nomination of four representative Spanish colonial missions. We hope this might be done in a joint nomination with the Government of Mexico.

ICOMOS adopted an international set of standards to deal with the protection of historic sites, and we wish to make this known throughout the country.

In conclusion, it is our understanding that the administration's 1990 budget recommends eliminating the international program funds for U.S. ICOMOS which were part of the 1989 Park Service budget.

We urge this committee to continue to ensure that the Park Service maintain at least a minimum active presence in international preservation network and remain as an active participant in the World Heritage Convention.

Thank you, Mr. Chairman.

Senator Reid. Thank you very much for your testimony here today.

STATEMENT OF NELLIE L. LONGSWORTH, PRESIDENT, PRESERVATION ACTION

Senator Reid. The next witness will be Nellie Longsworth, president of Preservation Action.

Ms. Longsworth?

Ms. Longsworth. Thank you very much. I am Nellie Longsworth, and I am testifying on behalf of the Historic Preservation Fund today as well as the partner programs in the Park Service, Advisory Council, U.S. ICOMOS, and Archaeology. I am president of Preservation Action, which is a grassroots citizens lobby that has active members in all 50 States. And I am here today to represent them before you.

In 1988 we had quite an increase in interest in the political side of historic preservation, and more and more people spoke up. We get calls about the zero administration request for the historic preservation fund. Many call about the need to reinstate the grants-in-aid program to assist in the restoration of endangered landmarks. We hear from a large number who will lobby for changes, or who want us to lobby for changes in the rehabilitation investment tax credits, to make them useful again. And we also hear from people concerned about looting of archaeological sites.

Others lament the poor condition of historic buildings within the National Park System. And last year, many became concerned about the Manassas Battlefield crisis.

When talking to our members throughout the country, all would say, well, we have a Manassas in our own State. And what they really meant was that historic resources and open spaces were increasingly becoming threatened by development and malls that were planned by developers with no sensitivity to the extant historic resources.

They too have found that their own local government officials were really interested only in the economic impact and not as interested in the historic values that were being lost.

They also realized that we have a very good historic preservation law and an excellent public-private partnership already in place. All want to take a proactive approach to their heritage and realize that adequate funding for the historic preservation fund with its incentives for local government participation in the program is an important first step toward avoiding the last-resort legislative approach that had to be taken when we hit the Manassas problem.

Funding of the HPF, the historic preservation fund, and the related programs are a good investment, an investment leveraged by States, local governments, and the private sector. This year we have been guided by the budget constraints facing Congress, in requesting $53.5 million for the fund.

Important here is adequate funding to the States to carry out federally mandated activities and encourage local governments to include historic preservation in their comprehensive planning.

We have learned that developers really want to know where and where not they are able to place their projects and malls. And in the absence of these plans, the crises arise.

To assist the hands-on work, $10 million in grants money is needed to save our most endangered cultural resources. Moneys for the national trust brightens the future for historic preservation in bringing creative assistance to local private and nonprofit preservation efforts.

This year, in addition to their needed base funding, the request includes a revolving fund, which is a proven means to bring commercial and private resources together with less reliance on public resources.

Historic preservation should be looked at by the appropriations committee in toto, with the clear knowledge that programs within the National Park Service, the Advisory Council on Historic Preservation, U.S. ICOMOS and Archaeology, and with the historic preservation fund are important to our Nation's future.

Our members will be contacting their Senators during the next few weeks to make a convincing case that this is the year to say yes to history.

Senator REID. I agree with you. Thank you very much for your testimony.

Ms. LONGSWORTH. Thank you.

STATEMENT OF MICHAEL D. CRADEN, PRESIDENT, NATIONAL ASSOCIATION OF STATE OUTDOOR RECREATION LIAISON OFFICERS

Senator REID. We will now hear from Michael Craden, president of the National Association of State Outdoor Recreation Liaison Officers.

Mr. CRADEN. Good morning, Mr. Chairman. We appreciate the opportunity to testify before you. The National Association of State Outdoor Recreation Liaison Officers are the 50 appointed government officials in each of the States who administer the land and water conservation fund program for the States.

You have received our written testimony, and there are a few points I would like to make with you today orally. And then you do have the testimony, as we've said.

First of all, we would like to thank the committee for continued support of our $20 million appropriation last year, and we are here to request that we receive continued support for the States grants program for fiscal year 1990.

Over the past 10 years we have watched the reduction of the State side land and water conservation fund reduced from $360 million—$369 million—to $16.7 million last year. As you may know, this is one program—one Federal program, State program, local program—that does work. Some 97.5 percent of the money is passed through to the local communities as it comes from the Federal share to the States.

The money originally, and still, comes from the royalties on the outer continental oil shelf. And so really we are expending a natural resource, and this program satisfies the need for land acquisition and development of resources, particularly on the State side—the county parks, the city parks, municipal parks—in all 50 States plus six territories. Something that we can be proud of to leave our children and grandchildren, a rich heritage in natural resources and outdoor recreation.

During the past 20 years, the land and water conservation fund program has provided matching funds for nearly 30,000 local projects in all 50 States. This is our 25th year as a partner in this program.

In addition to receiving adequate support and adequate funding for the land and water program, we are also here to strongly support the bill introduced by Congressman Mo Udall, the American heritage trust fund. This trust fund concept can provide a constant and dependable source of revenue for this program forever.

NASORLO really would like to request for fiscal year 1990 the $200 million appropriation for the stateside portion of land and water. In summary, Mr. Chairman, members of the subcommittee, in addition we would like to urge you to support the American heritage trust fund, which already has some 140 Congressmen, 140 House Members, and 22 Senators as cosponsors.

Thank you, Mr. Chairman, for the opportunity.

Senator Reid. Well, I have to say this, you've got a lot of nerve asking for an increase of—what is that—about 1,000 percent.

Mr. Craden. We used to receive $369 million, Senator, at the height of this program. It is money that was set aside by Congress from the royalties of the offshore oil leases. So, it is money that we feel is appropriately reinvested in the natural resources of this country.

Senator Reid. Well, as I do say, you are a brave man. You know, I am not saying you don't deserve the money, but you know, we've been doing about 1,000 percent less than you request, and you would break the Guiness Book of World Records if you got what you ask for.

Mr. Craden. We understand that. And we would appreciate any support you could give us.

Senator Reid. Thank you very much for your testimony.

STATEMENT OF WILLIAM F. BAKER, MEMBER OF THE BOARD, NATIONAL ASSOCIATION OF PUBLIC TELEVISION STATIONS

Senator **Reid**. Our next witness is Bill Baker, president of National Association of Public Television Stations.

Mr. **Baker**. Hello, Senator. Thank you for allowing me to testify today.

For the record, I am William Baker. I am the president and chief executive officer of WNET Channel 13 in New York, a public television station. I am on the board of the National Association of Public Television Stations.

WNET is the largest public television station in America, and it produces about 40 percent of all of the prime-time television programs seen on public television across the country.

Senator **Reid**. 40 percent?

Mr. **Baker**. Perhaps that much. It's kind of a hard calculation to make in our craft.

I am appearing before this subcommittee to speak to the importance of Federal funds to the National Endowments of the Arts and Humanities, particularly because without them many of the fine public television programs produced by WNET and the other large production stations simply would not be possible.

As the CEO of a publicly owned national production organization of the highest quality programs, I can appreciate what public television has been able to do in identifying the artistic geniuses and presenting it free to American homes and classrooms, regardless of the distance from the opera house, the museum, the library, or the symphony hall.

Senator, I was a former commercial broadcaster and president of a large commercial broadcasting company. I can tell you these programs will not be done by commercial enterprise, nor should they be done by commercial enterprise. Fortunately, public television makes them possible to all people, and it is really through the Government's contribution through the endowments that these important programs can be produced and broadcast.

Programs that describe the way we think, programs about sculpture and architecture that change the way we look at the world, programs that provide a record of history that trace the resources and richness of the mysterious beauty of our language, that describe the many ways that we choose to believe or not believe in God and the complicated rituals that we invent to accompany our beliefs—programs, in short, that track the very existence of our culture and its heart on a consistent basis day in and day out.

Now, the central role of the NEA and the NEH in creation and preservation of American cultural profile in media cannot be overstated. This claim is most easily defended, Senator, by a quick overview of the public television series that have relied on the NEA and the NEH support in the last two decades; 16 years of "Great Performances"; 14 years of "Dance in America"; 12 years, "Live From Lincoln Center"; 12 years of "Live from the Met"; 8 years of "American Playhouse"; 3 years of "American Masters"; 4 years of "Live from Off Center"; "The Adams Chronicles," 13 hours; "Heritage," 9 hours; "Women in Art," 6½ hours.

What you probably don't know simply from reading the funding credits at the back end of the program and front end is that the

NEA and NEH money is usually the first money committed to these programs. And it is those early crucial developmental dollars which form the cornerstones of arts funding in the media in this country. This kind of support helps define the project and ensures the employment of American performing artists, writers, filmmakers, and the dissemination of this American work throughout the entire country.

With the explosion of new media in this country, public television's mission has to be to focus on American content. And although there are more venues for arts and humanities, other media tend to rely on foreign programs. It is public television, with the support of the NEA, that brings the San Francisco Ballet, the Houston Opera, Providence's Trinity Repertory Theater, the Lyric Opera of Chicago, the Philadelphia Orchestra, and dozens of other great institutions from around the country to television screens, remote, urban poor, and middle-class people like myself who first got interested in arts by watching public television.

Would these American films and plays and operas and ballets and artists have been available to the entire Nation without crucial funding from the NEA and NEH? The answer to that question is no.

And without the continuing presence of the Nation's great performing arts institutions on public television, most Americans would have little or no exposure to the classic music, the dance, the drama of our culture and the work of the contemporary artists who are defining the culture of tomorrow.

So, Senator, those are our thoughts, and we have some formal statements which we have presented for you. I would be happy to answer any questions.

Senator REID. I appreciate very much your testimony.

Looking through your written testimony, of course, a lot of the things that you have talked about and bragged about a little bit I have watched. But I think—and I am sure you really don't care that much—but, as far as I am concerned, I think that No. 1 in my book was "Eyes on the Prize."

Mr. BAKER. Fabulous.

Senator REID. I have watched that a couple of times. I have that in my film library at home, and it's just outstanding. If you did nothing but that, you would have been successful.

So, thank you very much for your testimony here today.

Mr. BAKER. Thank you, Senator.

Senator REID. We really wish that we had more time to have dialog with the witnesses, but as you can see from the schedule, I have already had a little too much dialog with the witnesses. We are quite a ways behind.

We might, however, send some of you some written questions that develop during the hearing.

STATEMENT OF NANCY STEVENSON, CHAIR, FEDERATION OF STATE HUMANITIES COUNCILS

ACCOMPANIED BY CHARLES DAUGHERTY, EXECUTIVE DIRECTOR, HUMANITIES FOUNDATION OF WEST VIRGINIA

Senator REID. With that in mind, we would ask Nancy Stevenson, chair of the Federation of State Humanities Councils, to come forward. She is speaking on behalf of the National Humanities Alliance.

Anyone from West Virginia seems to help with this subcommittee for some reason. [Laughter.]

Ms. STEVENSON. Thank you, Senator. I am Nancy Stevenson. I have been a volunteer for public humanities programs for almost 10 years, and I am now chair of the Federation of State Humanities Councils.

I was really very excited to hear your question, Senator, to Mr. Walter about Lynne Cheney's report.

I heartily endorse everything that William Baker just said about the support for the arts and humanities endowments.

We have been grateful to Senator Byrd for a long time for his support of the humanities, his support of the history of the Senate and his support of his State council. Indeed, he even gave my husband and myself a humanities program in itself, driving through his State once, commenting on the culture and the history.

I am thrilled to recognize your interest by your questions as well.

It is, after all, the humanities that can bridge that gap of communication across the boundaries of generations and cultures. And we must hear and interpret the songs, the stories, the images that define our differences. We must learn to surmount the fragmentations, to reach beyond the boundaries of place, traditions, or disciplines, in order to make use of the riches of our heritage and find our common purpose.

So, when Mr. Baker was talking about those programs, he mentioned, I must say, many of the arts programs. I would like to mention some more of the humanities programs; for instance, "Eyes on the Prize," that you talked about; State councils have had a hand in supporting.

But it is the humanities, the endowment for the humanities, that will be funding, in large part, the program that is going to come out this spring on the Congress itself, done by Ken Burns. And another very sensitive one on the Civil War, that will take place, I believe, next year.

So that understanding our heritage and preserving it in preservation of our buildings, in preservation of our culture, all of this is one package that we are very pleased to have had congressional support for.

Our concern today—and I am speaking for the National Alliance of the Humanities, which is all of the different groups in the humanities coming together; that is both scholarly organizations and public outreach organizations. We must work together because we know that the skills of one are important to the skills of the other.

We are also going to ask for increased funding—not 1,000 percent, as we heard this morning—but we would like to have funding which brings the humanities endowment into parity with the arts endowment. They started off together, this great creation of Congress. This great experiment in public-private partnership started in the Congress, and the humanities and the arts had equal funding.

We don't want to diminish support for the arts, but we do believe that the life of the mind, education, deserves the symbolic equal support of appreciation of the arts. And indeed, the arts and the humanities must work together, and one is in fact a part of the other, so that they belong together.

We are asking for the same funding, the $170.1 million, that the arts receive currently because we need those extra funds. We are not able to meet the needs in the society at large for increased funding for education, for all of the background that support for the humanities gives to education. We think it's critical today.

Further, we know that it is still not equal to the moneys that we received in 1981 in real dollars. And we need to bring up our funding now to, in part, make up the difference in those real dollars.

Senator REID. Thank you both very much.

Ms. STEVENSON. Now I would like to introduce Charles Daugherty from West Virginia to speak more personally about this.

Mr. DAUGHERTY. No; I think our time is up.

Senator REID. The time is up. Sorry about that.

Mr. DAUGHERTY. Could I just reciprocate about your mentioning Senator Byrd. Certainly we appreciate his support. One of the projects in Nevada is to carry the dream well, "Native American Voices in the Old and New World." We think that's an exciting project that is happening in your State.

Thank you, Senator.

Senator REID. Thank you both very much.

STATEMENT OF E. DEAN LAUDEMAN, VICE PRESIDENT FOR EXPLORATION AND PRODUCTION IN THE WESTERN REGION FOR UNOCAL CORP., ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE AND THE WESTERN STATES PETROLEUM ASSOCIATION

Senator REID. The next witness is Dean Laudeman, who will speak on behalf of the American Petroleum Institute and the Western States Petroleum Association.

Mr. LAUDEMAN. Mr. Chairman and staff, thank you. I am vice president for exploration and production operations in the western region for Union Oil Co. of California, a major producing subsidiary of Unocal Corp.

I am testifying today on behalf of the American Petroleum Institute and the Western States Petroleum Association. I am here to testify against moratoria on OCS lands and not to ask for money but how to make money and improve the funding outlook for many of the projects that you have heard about here today.

I would like to depart from the prepared testimony which has been submitted to the subcommittee. I want to point out that the oil and gas industry faces major obstacles in the new 1-year-at-a-time leasing moratoria which has been imposed by Congress on millions of acres of promising offshore Federal lands.

We are now beginning the ninth year of such harmful and unnecessary moratoria. Each year these moratoria have been presented as only temporary measures having little impact on energy needs. I am here to tell you: don't continue the moratoria.

The cumulative impact of 9 years has been neither short term nor inconsequential. These moratoria have been bad in many ways, three of which are that moratoria has held back the urgently needed evaluation of the exploration and development potential of the offshore areas of the United States.

The time delay, Mr. Chairman, from study to drilling is as little as 5 years. It takes between 3 to 10 years following that for drilling and evaluation for production. It may take another 10 years before we will actually reach maximum production rates in some of the areas that are presently under study in areas where we have access. If we don't know where the oil and gas is and how much is there, we can't develop the list of resource inventories with any degree of accuracy.

I might add that the areas that are presently under moratoria—northern California, Florida, and the east coast—have higher chances of producing natural gas, giving those areas independent supplies of that preferred clean fuel.

The second reason that moratoria have been bad is that it has weakened efforts to strengthen U.S. energy security at a time when Congress has been aggressive in rebuilding our military security forces. The raw material of oil and gas which the military would use from secure U.S. supplies has remained in the ground, threatening the foundation of this defense buildup.

The third way moratoria have been bad is that moratoria against OCS operations has encouraged investment in foreign exploration and development, thus accelerating the flight of capital from U.S. labor and manufacturing—and research, as Charlie Mankin will testify later. This has permitted the massive imbalance of payments.

Moreover, the moratoria have been reimposed year after year, despite sound scientific evidence that offshore operations are compatible with the environmental protection of the seas, its marine life and the adjacent coastal areas.

As an example of how our industry has achieved compatibility with the environment in the affected States in this 9-year period, my company has done its homework so well that we have set two new production platforms on older leases in offshore California, one in the busy San Pedro Bay of the Los Angeles harbor area, and one off the pristine coast of northern Santa Barbara County at Point Pedernales. Both platforms have come on producing significant amounts of oil and gas from leases taken in 1975 and 1981, respectively.

This work does not come easily, but it has been done with excellence of execution because cooperation and consensus was reached between all groups affected along the coastal area, including the Department of Defense at Vandenberg. We are immediately downrange on the polar orbit path.

I repeat this all to you to help dispel the propaganda put out by the less experienced and less credible environmental lobbying groups whose main goal has been delay to perpetuate their cause while the meter runs. Our meter is running, too—the meter of inactivity and no planning to help solve the U.S. supply balance of secure energy.

We measure our contribution to the energy and manufacturing industries by jobs for labor and problem solving for our scientists and engineers. Congress has mandated through a thorough and comprehensive planned approach to the evaluation and later development in those areas blessed with natural resources.

Mr. Chairman and members of this subcommittee, current U.S. energy supply trends are moving to greater reliance on overseas producing countries and a weakened, declining U.S. oil and gas industry and its manufacturing partners and labor.

We would like to follow the Department of the Interior studies on the resource potential with operations that can say yes, the energy supplies are there, we can count on them, and in the case of negative results from studying and drilling, that if the oil and gas is not there, then the industry and Congress can make adjustments to the future energy supply needs and avoid running up blind alleys.

Senator REID. Your time is expired.

Mr. LAUDEMAN. Thank you, Mr. Chairman.

Senator REID. I think the written statement is very factual. We appreciate that very much. Some of the statistics are certainly enlightening.

Tell me why the main goal of the people who oppose offshore drilling would be only to delay it. What would be the reason for that?

Mr. LAUDEMAN. They have the perception that the damage from spills and the visible operations that would be seen from land to a platform are detrimental to either the tourist industry or to the coastal environment from the standpoint of biological or the ocean scene itself.

We again, in years and years of operation, have found it to be very compatible with all of that environment.

Senator REID. Thank you very much.

Mr. LAUDEMAN. Thank you, Mr. Chairman.

STATEMENT OF DAVID O. WEBB, SENIOR VICE PRESIDENT OF POLICY AND REGULATORY AFFAIRS GAS RESEARCH INSTITUTE [GRI]

Senator REID. Our next witness will be David Webb, with the Gas Research Institute.

Mr. Webb?

Mr. WEBB. Thank you, Mr. Chairman. I am David Webb, with the Gas Research Institute. I appreciate the opportunity to appear before you today to present GRI's fiscal year 1990 budget recommendations for gas-related research and DOE's fossil and conservation programs.

Developing these recommendations, GRI gave top priority to two areas: One, the need to develop our extensive gas resources to reduce our dependence on imported oil; and two, recognizing the critical role gas can play in helping to solve some of our environmental problems.

GRI and the gas industry recommend a total of $112 million for gas research in DOE's fiscal year 1990 budget, continuing programs Congress has previously approved.

Central to this recommendation is the fact that GRI is planning to commit $109 million to near-term research in these same programs. GRI is an independent, not-for-profit research organization that manages and finances an R&D program for the benefit of its 304 members and their customers.

Therefore, even though GRI is not a Government contractor, congressional action on the proposed DOE budget has a direct impact on GRI's programs, since we cofund approximately $30 million of research with DOE.

DOE recently concluded a study that U.S. oil imports will probably increase substantially to 10 million barrels per day by 1995. The same study targeted R&D on conventional gas as one critical step to reducing our dependence on imported oil.

Also, last May DOE performed a detailed assessment of total U.S. gas resources and reserves. They estimated there is over 1,000 trillion cubic feet of conventional natural gas, with 600 trillion cubic feet of this recoverable by using advanced technology at prices of $3 per thousand cubic feet.

However, the DOE 1990 budget request is totally inconsistent with this potential. The budget request for gas-related research in DOE's fossil and conservation program is only $32 million, a reduction of 62 percent from the $85 million Congress appropriated last fall.

The request for unconventional natural gas is only $4.1 million, less than 1 percent of the total fossil energy budget.

The budget does not support the administration's policy nor the gas potential.

Three is we would like to recommend would be that DOE create a post of assistant secretary for natural oil and gas within DOE. These two fuels provide over 65 percent of current U.S. energy. Yet the DOE budget devotes less than 6 percent of the funding to these two resources. Establishing an office of assistant secretary for natural gas and oil would demonstrate a commitment to getting this potential realized.

We would like to recommend that DOE initiate a geosciences program in fossil energy, with initial funding of a $20 million increment over what is proposed.

Third, we would propose an expansion of cooperative R&D ventures. These ventures, where the private sector puts up 50 percent of the funding, is a very cost-effective way to do cooperative research with industry.

We would particularly recommend cooperative R&D ventures in gas cooling, geosciences, and unconventional natural gas, natural gas vehicles and heat engines.

GRI is prepared to meet with DOE to discuss cooperative R&D ventures in these areas if funding is provided by Congress.

On specific programmatic recommendations, Mr. Chairman, in fossil energy, we would recommend $15 million for unconventional natural gas to go with our $33 million budget, $4 million of that for research in western tar sands, $4 million for Devonian shale with a focus on directional drilling, and $3 million in secondary gas recovery to continue the cooperative joint program between GRI and DOE, where industry is putting up over 50 percent of the money.

In the area of fuel cells, we would recommend $36.5 million, $24 million of this to complete funding of the three competing technologies in molten carbonate, and $10 million for advanced work in solid oxide.

In the conservation program, we would recommend $10 million in heat pumps to go with the $11 million of the GRI program for cooperative programs.

In cooling technology, we would recommend $8 million for DOE to focus on desiccant cooling.

Finally, in natural gas vehicles, Mr. Chairman, we would recommend $9.5 million to implement the program Congress authorized last year. We are working with engine manufacturers to develop a natural gas-fired diesel engine to be used on buses, heavy-duty transit trucks for inner-city transportation. We would like a cooperative program with DOE for them to demonstrate the technology we are developing.

In summary, GRI and the gas industry recommended a budget of $112 million for DOE to continue cooperative research with GRI and the gas industry while we fund $109 million in near-term research. We believe these cooperative efforts represent sound national energy policy.

Senator **Reid**. Every time I hear testimony like you have given, I am forever amazed at all the support that President Reagan got from the oil and gas industry, because all he did is talk. He didn't do anything. I mean, our oil and gas industry, as far as research and development, where we must go if we're going to remain competitive, was nonexistent, basically.

So, anyway, that's just a little political statement I thought I would throw in, because I really feel strongly about that. We just are not doing what we should do in the research field.

Mr. **Webb**. Thank you very much.

Senator **Reid**. So, go out and vote for Reagan. [Laughter.]

STATEMENT OF MICHAEL BALY III, EXECUTIVE VICE PRESIDENT, AMERICAN GAS ASSOCIATION

Senator **Reid**. Next is Mr. Baly, who is with the American Gas Association.

I hope I pronounced your name properly.

Mr. **Baly**. Yes, you did.

Thank you, Chairman Reid. I am Mike Baly, executive vice president of the American Gas Association. And Kenny Gwinn, who is chairman of Southwest Gas in Nevada, asked to send his regards to you and his thanks for your strong R&D program.

Senator **Reid**. He is one of the stars of Nevada, you know. He is an outstanding person. As you may or may not know, he started out as a school teacher.

Mr. **Baly**. Yes, sir.

Senator **Reid**. And he went on to become the superintendent of schools and bank president, and now he runs lots of things, including a public utility.

Mr. **Baly**. Yes, sir; we feel fortunate to have him as a member of AGA.

The United States needs an adequately funded DOE research program not only to meet future energy needs but also to remain competitive in today's world economy. The natural gas industry can make two major contributions to the competitive performance of U.S. manufacturing and industrial companies:

One, natural gas is, for most uses, a more economic, efficient, and environmentally sound fuel; and two, a new, highly efficient gas-powered electric generation will improve the economy of electric energy.

Of interest perhaps to Chairman Byrd, earlier this morning in a House subcommittee, Congressman Regula asked several questions regarding the use of coal and gas together for cofiring and select use, particularly in those high sulfur coal electric utilities where he thought scrubbers were impossible to use. And we committed our support to work with him particularly to help him then with a more flexible acid rain approach to help with the DOE funding.

Like Dave Webb of GRI and IGT, AGA recommends an appropriation of $112.4 million for all DOE gas-related R&D under your jurisdiction. This does compare to $94.45 million last year.

The three major increases in our request are related, however, to energy efficiency: the natural gas heat pump, the high-efficiency heat engines; and fuel cells. These are especially important to focus on air pollution.

We also recommend strong support for geosciences research effort, aimed at increasing understanding of the Earth's gas- and oil-related exploration and recovery and improving such technologies.

The House Science Committee took this step last year when it authorized $20 million solely for gas- and oil-related geosciences program. We encourage your subcommittee to take similar action this year.

Regarding your comment on the previous administration, Mr. Chairman, we are pleased that finally last year DOE did release a bullish study on natural gas, focusing greater attention. We hope that their next step would be their support for adequate gas supply-related research to ensure the recovery of a larger percentage of the total gas resources.

Even though we commend DOE on increasing their natural gas-related budget request by 40 percent, it is still a long way from your appropriation of about $100 million for total gas-related R&D last year.

So, we are pleased that your subcommittee had the foresight to restore by almost three-fold DOE's request for fiscal year 1989.

We also recommend $9.5 million for natural gas-powered vehicles, which includes providing full funding necessary to implement the law enacted last year called the Rockefeller-Sharp bill, which would provide for natural gas vehicle development and demonstration programs.

Broad development of vehicles fueled by compressed natural gas would serve the national interest by improving air quality.

I believe you are aware, Mr. Chairman, that Las Vegas has the largest natural gas filling station, and this bill, we feel, would help complement that in other parts of the country.

In closing, we recognize the continuing budget deficit places severe constraints on Federal energy research dollars and makes your job a tough one. Our total recommendation is slightly higher because of the increasing urgency to promote energy conservation through more efficient end-use technologies.

However, with the focus of the administration, Congress, and the public turning toward clean air problems and a general consensus that natural gas has a larger role to play in solving these problems—we're not a panacea, but we can play a larger role—increased Federal funding for R&D is necessary to implement these national goals.

Thank you for your past support, Mr. Chairman.

Senator REID. I can't pass this up. Not only do we have the largest natural gas filling station, but we have the largest producing oil well in the United States in Nevada.

Mr. BALY. I didn't know that. I am glad to find that out. I am impressed.

Senator REID. At least we did last year.

Mr. BALY. Thank you, Mr. Chairman.

STATEMENT OF FRANK C. SCHORA, PRESIDENT, M-C POWER CORP.

Senator REID. Our next witness is Frank Schora, president, M-C Power Corp.

Mr. SCHORA. Thank you, Mr. Senator, and members of the committee.

I am Frank Schora, president of M-C Power Corp., a company formed for the purpose of scaling up and commercializing the molten carbonate fuel cell. A new concept is being used, known as the IMHEX design, which would significantly reduce the cost and the complexity in the evolution of the technology from laboratory to commercial size.

M-C Power was created in 1987 and is now a capitalized multi-shareholder-owned corporation. The Institute of Gas Technology has contributed its IMHEX technology in future technical support for a share of the corporation. Other shareholders have contributed the necessary capitalization.

Since it has been established with this one goal and has stockholders investing because of their interest in this goal, M-C Power will be very efficient in pursuing this objective. An integrated coal gasifier/molten carbonate fuel cell powerplant can use coal to produce electricity at an efficiency approaching 55 percent, compared to 33 percent for conventional coal-based systems.

Using natural gas as fuel, it is possible to achieve efficiencies in excess of 60 percent. Its modular nature allows its use in a wide range of sizes and applications from small onsite natural gas-fired cogeneration systems to coal-fueled baseload utility powerplants.

A molten carbonate fuel cell system can be used to retrofit older coal-fired powerplants. An independent system analysis shows that such a system can achieve a 99.95 percent in SO_x and an 84-percent reduction in NO_x. For new molten carbonate fuel cell power plants which would have a coal-to-electrical power efficiency approaching 55 percent, a 42-percent reduction in both fuel consumption and carbon dioxide emissions can be realized when compared to the conventional systems.

Such an efficiency gain can have a significant impact on reducing the possible greenhouse effect.

To assist us, M-C Power has created a program advisory group consisting of representatives of several utilities and industrial companies interested in future power generation. Our prime objective will be to scale up to commercial size and manufacture fuel-cell stacks. In pursuing its goal, we are working under a DOE contract with IGT and Combustion Engineering.

When I reported to this subcommittee last year, I mentioned our new IMHEX concept. I am pleased to report that two 1-square-foot stacks have been designed, fabricated, and tested this last year, based on this concept, and have performed to expectation.

In order to meet our schedule, which would see the introduction of commercial-size stacks for demonstration in fiscal year 1994, we are now planning for the installation of larger equipment necessary for the manufacture of components. We plan to move this month into a new building located in Burr Ridge, IL, which will house these prototype manufacturing facilities.

Thanks to the assistance of this subcommittee, we have the funding necessary to carry this program through the end of fiscal year 1989.

We anticipate that 3 additional years will be necessary to see us into actual prototype production. Because scale-up of molten carbonate fuel cell systems is underway by three DOE contractors, each of which is pursuing their objective on a different design basis, we feel it is not appropriate to select a single approach at this time but to fund each of the three contractors at an $8 million level for fiscal year 1990.

This $24 million will be well spent as funding levels in other countries, for this very promising technology will be significantly greater than the $24 million.

In the out years, M-C Power presently anticipates funding requirements of $10 million in fiscal year 1991 and $12 million in fiscal year 1992, at which time large commercial-size stacks should be under test. At that time, M-C Power would look to participation in the Clean Fuel Program.

I thank you for your attention and would be happy to answer any questions.

Senator BURDICK. Thank you.

STATEMENT OF RICHARD LAWRANCE, DIRECTOR, FUEL CELL ASSOCIATION

Senator BURDICK [presiding]. Our next witness will be Richard Lawrance. Is he present?

Welcome to the committee.

Mr. LAWRANCE. Mr. Chairman, my name is Richard Lawrance. I am here to testify as the director of the Fuel Cell Association concerning the Department of Energy's fiscal year 1990 fuel cell budget. My comments will concern the total DOE Fuel Cell Program.

There are a number of concerns that we believe have the potential to dramatically impact our national energy posture. These include: one, the environment; two, electrical power shortages; and three, the need for new clean transportation fuels.

Fuel cells, because of their very high efficiency and very low emissions, are the best solution to providing power among all the currently known generation options.

The Fuel Cell Association believes that the above concerns are optimally resolved if the fuel cells are broadly deployed.

This past year, the national awareness of the deterioration of our environment has grown. While no one solution can answer all the challenges, fuel cells are a significant part of the response. Since there is no combustion in a fuel cell, there are no acid rain promoters. Also, fuel cells produce only a fraction of the carbon dioxide emitted by conventional power systems.

The U.S. fuel cell efforts are rapidly eroding due to the steadily increasing foreign budgets and pressure. A major opportunity for U.S. leadership is to institute a more balanced allocation of funding to include fuels other than oil and gas.

While electrical power shortages are being forecast, nuclear constructions have faltered, and coal-fired plants are under increasing pressure due to environmental concerns such as acid rain. We see fuel cells as having the potential to solve many of the problems now facing the electric utility industry.

Another problem is the lack of funding for demonstration. The U.S. dominance of the power generation equipment market is eroding as other countries aggressively fund womb-to-tomb programs, including scaled demonstrations. The Federal Government should create and support new technology demonstrations. Not to do this will mean the loss of U.S.-developed technological innovations to overseas manufacturers, as has happened in other technologies.

We believe that particular emphasis by Congress should be given to the use of fuel cells in transportation. Fuel cells offer the chance to significantly reduce the enormous energy use by our transportation system and to significantly reduce the environmental impact.

Concerning the DOE 1990 budget, in the Fossil Energy Program we recommend a total of $36 million for molten carbonate advanced concepts, advance programs in technology and crosscut programs.

Turning to the transportation and conservation programs, we recommend a budget of $8.6 million to cover energy storage, conservation, and renewables.

The grand total recommended for the DOE budget is $44.6 million.

We would also like to make three other nonbudget recommendations:

Some form of Federal Government incentive should be offered to encourage the commercialization of fuel cells;

Congress should establish a mechanism to annually review the worldwide development of fuel cell technologies;

And DOE should expand the participation of industry in establishing its long-range fuel cell plans.

In conclusion, fuel cells are the most energy-efficient devices currently known for converting fuel to electric power, with the added benefit of a very low environmental impact.

The United States has led in the fuel cell development to date, but now it appears that this lead will rapidly narrow as foreign governments increase their funding.

Fuel cells will become a commercial technology. The only question is will the United States be an exporter or an importer of fuel cell systems?

We thank you for this opportunity to present the Fuel Cell Association's viewpoint on the DOE budget.

Senator **Burdick**. Thank you very much.

STATEMENT OF FATHER WILLIAM L. GEORGE, S.J., GEORGETOWN UNIVERSITY

Senator BURDICK. The next witness will be Father Bill George, Georgetown University.

Are you going to tell us some more about fuel cells?

Father GEORGE. Just a bit.

I remember when I was the only one testifying on fuel cells. [Laughter.]

Senator BURDICK. How about old cars, do you have some information about old cars?

Father GEORGE. Well, I ended up with one that doesn't have a carburetor. It's fuel-injected now. So, I lost my gizmos for carburetors.

Mr. Chairman, I am Father George, assistant to the president of Georgetown, and I thank you for the opportunity to testify. I would like to ask the committee to provide $2 million for the Phosphoric Acid Fuel Cell Bus Program. We are pretty much on schedule as far as the technical end of it goes. We are about 3 months, a little behind, but we are way ahead, I think, of the commercialization end of it.

An exciting development was when our engineers went out to California, the California South Coast Air Quality Management District decided they want to participate in the program and are going to send some of their State funds to the Department of Energy. They will participate over the next 3 years in the program. So, that's very exciting and that we are ahead of schedule on people seeing the worth of that kind of a bus system and they have a critical problem. What it also showed is that the environment seems to be as much a mover of the technology as the cost of oil.

What I would also like to ask the committee to consider is that the Department is moving along with the next generation of fuel cells, advanced fuel cells. And last year we had been discussing with General Motors a 50-50 participation in that program. And GM has decided to put up $500,000 and are working that with the Department, finalizing that now.

So, I would ask the committee if they would also consider giving the Department about $1½ million for the advanced fuel cell system.

My goal is to have you ride in a fuel cell bus before Alonzo Mourning graduates. And I think we can pull that off.

Finally, I love the Chesapeake Bay, and I have noticed the erosion of the waterfowl along the bay this year and last year. And I would like to ask the committee if they would just be really careful in preserving the wetlands and the habitat for the waterfowl. It's becoming a real problem. I grew up there, and the wetlands are going, and once they're gone, they're gone. We don't make that, God makes that.

Thank you, Mr. Chairman.

Senator BURDICK. Thank you very much.

You mentioned the fact that California has a program. How much money is it? Are they providing money actually?

Father GEORGE. Yes; you know, they haven't finalized the agreement with the DOE, but it's about a little over $2 million, and they want some buses to be produced so that they can test them as well.

What it does is it dovetails with us and helps make sure that our program doesn't overspend itself, that we're keeping in our budget. We will stay within the limit we promised.

Also, the contractors, by the way, who have participated, the two general contractors, one is participating with a 30-percent match and the other a 24-percent match. That adds up to about $1.5 million they are participating with as well. So, we are doing well.

I mean I am glad the committee had the vision and the will to help us along when nobody else thought it was really technically feasible. It's getting there. Thank you.

Senator **BURDICK**. Well, if you can discover some further savings for my 1969 Cadillac, let me know, will you?

Father **GEORGE**. I will, Mr. Burdick. Thank you. God bless.

STATEMENT OF CHARLES J. MANKIN, CHAIRMAN, ACTION COUNCIL FOR COORDINATED OIL AND GAS RESEARCH AND DEVELOPMENT [ACCORD]

Senator **BURDICK**. Our next witness will be Charles J. Mankin, Eastern Oil Shale, FER&D.

Mr. **MANKIN**. Thank you, Mr. Chairman.

Senator **BURDICK**. Welcome to the committee.

Mr. **MANKIN**. My name is Charles Mankin. There apparently was an error on the listing. I am testifying on behalf of the Action Council for Coordinated Oil and Gas Research and Development.

ACCORD is composed of some 80 organizations of State government, associations, research organizations, and petroleum experts. ACCORD was organized some 2 years ago to endorse the recommendations of the Energy Research Advisory Board for the Department of Energy on geoscience research for energy security.

ACCORD is funded by in-kind contributions from its members. It neither receives nor spends Federal funds.

Mr. Chairman, we believe that America today is at a crossroads. Oil is the mainstay of the transportation fuel sector. However, the United States is now poised to abandon as much as 325 billion barrels of known oil in existing reservoirs for the lack of technologies and sufficient understanding to produce it.

A portion of that, Mr. Chairman, is in your own home State in the Williston Basin.

America also has an enormous natural gas resource base, as has been testified to earlier by several witnesses. That natural gas can be used in transportation, heating, and industrial sectors and to help mitigate environmental impacts of some fossil fuel combustion.

We believe that we have an urgent choice to make. Our choice is simple: We can either effectively abandon the remaining oil and some of the natural gas resource base in favor of increased imports from foreign sources of supply; or we can develop an integrated policy of incentives, research and technology development, the results of which could produce as much as 90 to 100 billion barrels of recoverable reserves at reasonable prices.

Why do we believe this choice to be urgent? Because present low prices and maturing reservoirs are causing wells to be plugged and abandoned at an alarming and accelerated rate. And once those wells are abandoned, access to those reservoirs are lost—in many instances forever.

The cost of the imports—$34 billion in 1987—will rise to $120 billion by the year 2000. And, Mr. Chairman, we believe that to be a very, very conservative estimate.

Both the Department of Energy and the Department of Commerce have concluded that rising dependence and related costs threaten the United States and Western security.

The current Federal research program organization does not work, and the program sponsored by the Federal Government is not focused. The Energy Research Advisory Board's investigation found that 17 oil- and gas-related geoscience programs exist under three different assistant secretaries. The program was deemed unacceptably small, not focused on the highest-priority needs, was fragmented, and had no overall coordination or strategic plan.

The Energy Research Advisory Board recommended that the Department of Energy redirect its R&D priorities to increase U.S. oil and gas production, to integrate currently disparate R&D programs into a high-level office, and to develop an analytically based strategic research plan, to enact a budget for fiscal year 1988 that was $50 million larger than the fiscal year 1987 base level, rising to an incremental $100 million funding by fiscal year 1990.

The Federal Government's response to the ERAB's report has been disappointing. In response to the recommendation for consolidation, they added bureaucratic entities 18 and 19, the office of geoscience research and the hydrocarbon geoscience research coordinating committee.

Mr. Chairman, ACCORD recommends a national oil and gas policy with improved geoscience understanding of known reservoirs, development of advanced oil and gas extraction technologies, maintenance of economic access to known reservoirs through existing wells, and economic conditions that will permit future applications of improved technologies.

Essentially, Mr. Chairman, we advocate that the Department of Energy reorganize its fossil fuel energy research program into two offices—an office of oil and gas, and an office of coal—each with its own assistant secretary.

We also recommend that the funding level appropriate a consolidated oil and gas geoscience extraction research program and policy budget such as we have outlined in your handout.

We would like to support increased funding for an organized directed effort in oil and gas research because we believe that is in the Nation's best interest.

Thank you, Mr. Chairman.

Senator **Burdick**. Thank you very much.

You may wish to note that despite the supportive words, the administration's budget request does not support a strong oil and gas research and development program.

Mr. **Mankin**. That is correct, sir.

Senator **Burdick**. The subcommittee has been more supportive with its appropriations. What do we do about that?

Mr. **Mankin**. Well, sir, we try hard to turn it around.

Senator **Burdick**. OK. Thank you very much.

Mr. **Mankin**. Thank you, sir.

STATEMENT OF WILLIAM E. DENNIS, VICE PRESIDENT, MANUFACTURING AND TECHNOLOGY, AMERICAN IRON & STEEL INSTITUTE

Senator BURDICK. Mr. William Dennis, representing the American Iron & Steel Institute [AISI].

Mr. DENNIS. Good morning, Mr. Chairman, gentlemen.

I have come here this morning to respectfully request that you will appropriate for 1989 the $20 million which were authorized under the steel initiative in Public Law 100-680. I represent AISI, and I am also involved in the direct steelmaking project, which is currently in the final stages of negotiation with DOE. We are very excited about that project, and we are moving ahead with our own member company money. We are spending about $2 million in the next 3 months to get that project moving.

The significance of this project and the other projects that we plan to bring forward next year is to go from our old-fashioned batch processing, which is generally open and has serious environmental problems, to the modern continuous form of processing.

One of the great incentives is that with continuous processing we will be able to make improvements using all those good things that are coming out of the computer revolution such as expert systems and artificial intelligence.

We and our member companies are now putting together additional proposals beyond direct steelmaking so that we can get into strip casting and also automate finishing processes and bring them into line with the best technology anywhere in the world.

For fiscal year 1990 about $10 million will be needed to sustain this direct steelmaking project, which already started, approximately $5 million for strip casting and the remaining $5 million for additional projects that we will be bringing forward and also, I assume, the aluminum industry and some of the other metal industries.

I would be happy to respond to any questions you may have.

Senator BURDICK. Thank you. That is all very well. Thank you.

Mr. DENNIS. Thank you.

STATEMENT OF WILLIAM S. KRESS, PRESIDENT, KRESS CORP.

Senator BURDICK. Our next witness will be Edward Kress, president of the Kress Corp.

Welcome to the committee.

Mr. KRESS. Thank you, Mr. Chairman and members of the committee, for allowing me to speak before you. I am president of the Kress Corp., located in Brimfield, IL. We specialize in design engineering and fabrication of material-handling equipment for industries such as steel, mining, and earth moving. We have been in existence since 1965.

One of the innovative technologies we have developed for use in the steel industry is the coke oven process to make sure that there is no pushing or quenching emissions from coke ovens.

Our system of dry coke improves the yield and totally eliminates any emission problems from quenching which are not at the moment legislated against. From an environmental standpoint, we will eliminate much sulfur dioxide and other pollutants and will not require water for quenching, which eliminates quite a problem in cleaning up the water.

With respect to energy savings, we have estimated that our system, if it achieves full market penetration, would conservatively save more than 7 trillion Btu's annually, or the equivalent of 400,000 tons of coal. In addition, there are waste reduction benefits in benzene and other particulate matters in waste material back at the coal mines.

To date, we have tested our technology under controlled conditions and have found very promising results. Currently, one of the major steel companies is upgrading the coke oven pushing system at one of their plants. They are very interested in that technology but have questions relating to it.

However, they are considering a $15.5 million full-scale project. If the project is not successful, they will have to revert to the conventional systems of hoods and sheds.

As ours is a new technology, it is untested, totally developed by us, with all domestic engineering, labor and equipment, we are proposing a risk management cost-sharing program, the details of which would be developed along the following lines: two-thirds by industry and one-third by Government.

Being a participant, the Government agents would be involved and would have access to design and operational and test data. If the technology proves successful, there would be opportunity for it to be installed on approximately domestic 30 ovens, with batteries in 12 States.

The technology, we believe, is the next generation of pushing emission controls.

I would like also to state that we had some people from Germany that came over and looked at our technology—and this is probably more relevant to Mr. Dennis' comments—but after they had seen our technology and seen it in its initial test stages, they said to me that they couldn't understand how an American company could come up with such innovative technology. I am afraid that as a country we are slipping behind the foreign countries like Japan and Germany, and that we must put more effort and consolidate our effort between Government and industry.

Senator BURDICK. As chairman of the Environment and Public Works Committee, I am glad that someone is working too develop a cleaner cokemaking process.

Mr. KRESS. Sorry, sir?

Senator BURDICK. I am glad that someone is working to make a cleaner coke process, which you seem to be doing.

Mr. KRESS. That's true, sir. We are trying to clean up the environment, and one of the most interesting aspects of this system is that it addresses the quenching emissions, which as I said was not required.

But it also, because of the reduction in breeze or, let's say, coke that is too small to be used in the blast furnace, we get significantly additional coke to put in the blast furnaces.

And the coke is better. There has been some Russian and Japanese work which was extremely expensive—probably in the order of ten times as expensive as ours—that shows that they can be quite a bit more production out of the blast furnaces if you do use dry coke, which is what we are producing for free, for all practical purposes.

We also, in integrating this technology, I have been told by some of the operating people that it will not be the environmental people that will be rushing to our door, it will be the operating people because we will have eliminated much of their problems on the coke side.

So, this is not only a system that is cost effective, it will improve production and also take care of the environment.

Senator **Burdick**. Thank you very much.

Mr. **Kress**. Thank you.

STATEMENT OF BERNARD S. LEE, PRESIDENT, INSTITUTE OF GAS TECHNOLOGY

Senator **Burdick**. Our next witness is Mr. Bernard Lee, of IGT. Welcome to the committee.

Mr. **Lee**. Thank you, Senator Burdick. I am Bernard Lee, president of the Institute of Gas Technology, which is a not-for-profit private organization in Chicago devoted to experimental energy R&D for almost 50 years.

This year the two most widely publicized and critical issues facing the energy industry are environmental, cleaning up nuclear waste and assessing the impacts of global air pollution. We may not yet know the magnitude of these problems, but we know that their solutions will not be easy.

While the problems of the nuclear industry and our resurgent reliance on imported oil remind us of the importance of our vast domestic supplies of fossil fuels, the environmental warnings of acid rain and other air pollution problems help focus the task of finding ways to use fossil fuels more cleanly.

This subcommittee has shown excellent leadership in directing energy research for the future, while the growing constraints of budget pressures will make every decision more difficult.

Although we cannot come to you with guarantees, the research community, through its recommendations to this subcommittee, must help focus the search for sound future energy technologies.

IGT is proud of its work. Our recommendations focus on improving the efficiency of developing technologies lowering the costs of commercialization and addressing environmental concerns. We have involved private industry in planning and developing many of our projects, helping to ensure their commercial applicability.

IGT strongly supports the positions and recommendations of the gas industry. We agree that an assistant secretary for natural gas should be appointed and that the total Federal gas research efforts under this subcommittee's jurisdiction should be funded at $112.4 million for fiscal year 1990.

Within the gas industry recommendations we specifically recommend the following:

In the fuel cell area, our IMHEX molten carbonate fuel cell design is one of three technologically distinct approaches in an ongoing DOE effort to develop a molten carbonate system. IGT has made significant progress in developing the IMHEX system, with its unique internal manifold design, and is ready for long-term operation and testing the performance of scaled-up stacks.

Therefore, we recommend $24 million to be evenly divided among the three existing molten carbonate fuel cell contractors for development, scale-up, manufacturibility, endurance, and large-scale component testing.

In addition, IGT recommends $1 million to expand technology-based research, including the continuation of existing contracts for alternative anodes and corrosion prevention, which will be useful to all three molten carbonate fuel cell efforts.

In the area of advanced fuel cell concepts, we recommend $0.5 million to continue the evaluation and development of the solid-state proton conductor fuel cell now under DOE contract that uses perovskites, a new class of ceramic materials.

In the area of coal bed methane we need greater study of the geoscience of coal beds to allow us to better tap this vast energy resource. IGT recommends $1 million for the joint geoscience research effort of IGT, the University of Alabama, and the West Virginia University, to determine the relationships among coal type, grade, and rank and geology and recoverable methane from a wide range of coal beds to allow for the maximum production of natural gas.

In the area of coal, IGT is heading a team under DOE contract to develop a mild gasification process to convert coal to marketable value-added products, to produce sufficient quantities of products for commercial testing and establish process economics, it is necessary to move to the process development unit stage.

IGT recommends $0.4 million for the completion of the initial mild gasification test program and $3 million for initiating design and procurement of long-lead items for a cost-shared 24-ton-per-day PDU based on IGT's concept.

We also recommend two additional programs, one in the area of clean and efficient coal combustion. We have patented an advanced two-stage coal combustor capable of either atmospheric or pressurized operation, making it adaptable for retrofit or in combined-cycle power generation.

We recommend $1 million to develop this advanced concept using our sloping grid fluidized bed and cyclonic combustion technique using existing PDU facilities.

Finally, in oil shale, with cost-effective production technology, eastern oil shale could be a major addition to our major domestic energy supply. Retorting with hydrogen dramatically increases the yield of oil from eastern shale. A team led by IGT has been advancing this concept, called PFH.

We recommend $8 million for the eastern oil shale program, including $3 million for the continued development of the PFH process using foil membrane and hydrogen production and a carbon dioxide and methane mixture in oil shale upgrading, and $1.5 million for the design and engineering of a 4-ton-per-hour transportable PFH process development unit.

Thank you, sir, for the opportunity to appear before you.

Senator BURDICK. Thank you very much.

STATEMENT OF DON WARNER, DEAN OF THE SCHOOL OF MINES AND METALLURGY, UNIVERSITY OF MISSOURI

ACCOMPANIED BY:

RICHARD BAJURA, DIRECTOR, ENERGY AND WATER RESEARCH CENTER, UNIVERSITY OF WEST VIRGINIA

GEORGE FUMICH, CONSULTANT, ENERGY AND WATER RESEARCH CENTER, UNIVERSITY OF WEST VIRGINIA

Senator Burdick. Next is Don Warner, State and land-grant colleges.

Mr. Warner. Thank you, Mr. Chairman. I am Don Warner. I am dean of the School of Mines and Metallurgy at the University of Missouri at Ralla. Accompanying me with respect to this testimony is Dr. Richard Bajura, on my right, who is director of the Energy and Water Research Center at West Virginia University; and Mr. George Fumich, who is a consultant to that same organization.

We are testifying on behalf of the mineral resources program, the Mineral Institute's program, Mining and Mineral Resources Research Institute's programs that supports mineral education and research at 32 universities in the United States and a generic center program that is also part of that research effort.

We very much appreciate the past support of this committee with respect to that program. As you probably know, the administration has recommended no funding for that program for the last 8 years, and that is also true again this year. It is through the efforts of this committee and the similar committee in the House that appropriations for this Mineral Institute Program have been provided. We also very much appreciate the reauthorization of this program that was accomplished last year.

We believe that the 32 universities and colleges involved in this program have justified your confidence in the program through their performance, which is closely supervised by the Bureau of Mines and the advisory committee that exists to the Secretary of the Interior.

I would like just to bring to your attention a slogan which originated in Missouri but which is now widely used nationally, the saying that if it can't be grown, it must be mined. It sort of indicates the value of the minerals industries to the economy of the Nation.

I might also call your attention that this is the only federally funded research program for mineral research in the U.S. colleges and universities.

Some years ago there was funding for research through the Bureau of Mines itself, and there was funding through other sources such as the National Science Foundation. That is no longer true. The only significant Federal funding that is provided for mineral education and research is through the Mineral Institutes program.

There are two parts to the program. There is an allotment grant component and a generic center research component. The allotment grant program provides funds to 32 universities and colleges involved in the program and an equal amount to each this year, $138,000 to each one of those colleges and universities.

The second part of that program is the generic center program, which was originally focused at four colleges and universities and now includes additional generic centers that have been established for respiratory dust and marine minerals research.

We respectfully ask you for support similar to that that was recommended last year by this committee. In particular, we would ask that the ongoing support for the generic centers be continued at a level of $1 million each for the original four generic centers, and that funding also be provided for the respiratory dust center at $2.5 million, and the marine minerals center this year at $1.6 million.

We would like to ask that the initiative that this committee took last year to provide funding for an additional generic center be considered as a possibility again this year.

We believe, and there is widespread support for the concept, that the existing generic centers, while each are effective in the areas that they represent, do not represent a broad enough framework of research to encompass the broad needs of the mineral industries and that there is justification for additional centers in such areas as might be identified by the Bureau of Mines and the advisory committee to the Bureau of Mines.

With respect to the allotment grant program, we would ask that that be increased to bring it to the same level of funding that it actually had some years ago, which has now been eroded by the loss of value of the dollar.

Thank you very much for the opportunity to testify.

Senator **Burdick**. Thank you very much.

STATEMENT OF JOHN HEISSENBUTTEL, MANAGER, FOREST POLICY AND RESEARCH, AMERICAN FOREST COUNCIL

Senator **Burdick**. Our next witness is John Heissenbuttel. Is that pronounced correctly?

Mr. Heissenbuttel. Good afternoon. I want to congratulate you on correctly pronouncing my name. My name is John Heissenbuttel. I am manager of the policy and research program for the American Forest Council.

The American Forest Council is a jointly sponsored organization by the American Paper Institute and the National Forest Products Association.

We represent the private forest management interests of the forest products industry.

The Forest Service, the academic community and the private sector, we feel, have key and highly related roles in the areas of research, technology transfer and forest protection. Therefore, private forest landowners are directly affected by the quality and dimension of the Forest Service Research and the Forest Service State and private forestry programs.

As a result, we have a keen interest in how these programs are funded. Forest Service Research plays an essential role in addressing resource management and environmental challenges which are national and even global in scope.

The proposed budget identifies six priority areas for expansion of the research program. These range from global climate change to southern forest productivity. We feel each are relevant and timely.

These issues, because of their scope, are best addressed by the existing, long-term Forest Service Research Program.

Now, while the proposed budget expands the range of the Forest Service Research Program, the recommended funding level is 3 percent less than the 1989 appropriation.

We're concerned that the funding and staffing decisions which must be made under this reduced proposal will adversely affect those programs which are high priority to the American Forest

Council, programs such as Timber Management and Resource Analysis Research.

Much of the work under these two programs is ongoing, long-term, cooperatively funded and basic research representing a significant investment. This investment has and will continue to result in a payoff of millions of dollars.

Forest Service Timber Management Research increases productivity from forest lands. We know that. In light of the continuing shrinking public and private land base, cost-effective and environmentally sound genetic and silvicultural techniques must be developed to improve forest growth to meet demands.

We believe the proposed funding levels for genetic improvement through biotechnology and improving forest productivity are inadequate.

Resource Analysis Research provides necessary information for both the private and the public sector to guide investment and policy decisions. These decisions affect the economic strength of the U.S. forest products industry and the future of the forest resource.

Accordingly, Forest Service resource analysis information must be both accurate and timely. We were, therefore, concerned that the funding level as proposed would not be sufficient to support the collection of inventory data just once every 10 years.

We have worked closely with the forest inventory analysis program by providing technical and policy review of the Resource Planning Act, the assessment and the program.

Currently, and certainly under the proposed budget, the Forest Service RPA process is constrained by the lack of financial equipment and staffing resources.

Finally, in the area of research, the American Forest Council supports the transfer of the Competitive Forestry Grants Program from the Forest Service budget to the Cooperative State Research Service.

We request that this committee help in any way possible to revitalize this program.

Now, through State and private forestry programs, the Federal Government plays a key role in accomplishing technology transfer of forest management and protection research to the States and private sector.

It's especially important with the private, nonindustrial landowner who makes up 58 percent of the forest land base of the United States that this program be funded.

Now, these programs have received a disproportionate reduction in the President's proposed fiscal year 1990 budget. We believe the responsibilities of this program in order of priority are: fire protection, forest pest management, forest management—programs specifically aimed at improving forest productivity from nonindustrial lands, and forest products marketing initiative.

The American Forest Council is reviewing the budget proposals in detail and will forward supplemental comments to you within the next several weeks.

I appreciate the opportunity to testify today and I'll be glad to respond to any questions.

Senator BURDICK. Thank you very much.

Mr. HEISSENBUTTEL. Thank you.

STATEMENT OF RALPH GLOVER, WEST VIRGINIA STATE FORESTER, NATIONAL ASSOCIATION OF STATE FORESTERS

Senator **Burdick**. William Glover, National Association of State Foresters. Welcome to the committee.

Mr. **Glover**. Thank you, Mr. Chairman. My name is Ralph Glover. I'm the acting State forester from West Virginia. And I'm here today representing the National Association of State Foresters, speaking in behalf of the State and private forestry budget as well as comments regarding the research budget.

The National Association of State Foresters is comprised of the directors of State forestry agencies in each State and U.S. territory. State foresters administer programs that protect and manage the majority of our Nation's forests.

State forestry programs are a vital link between private forest landowners and the public's need for forest resources.

The Federal Government provides assistance to private landowners through the State forestry agencies through an excellent working partnership.

There is increasing pressure on America's private forests to provide more commercial timber and to meet growing environmental and recreation needs. The National Association of State Foresters has concern that the administration does not fully recognize the role of the U.S. Forest Service in protecting and managing private forest in the United States.

The fiscal year 1989 appropriation was $86.6 million for State and private forestry. This year, the administration proposes a budget of $48.6 million, a 56-percent reduction.

The National Association of State Foresters recommends an appropriation of $99.4 million, which is an increase over last year's level.

You have the written testimony submitted for the record. I would like to just highlight a few items in that testimony.

Under forest pest management, one of the critical areas is that of protection of our forest resources. In the area of forest pest management, most pest outbreaks are regional or multiregional in nature. And their early detection and treatment is very important.

The State and Federal Government must cooperate in early detection efforts to keep suppression costs at reasonable levels.

You'll notice in our recommendations additional funding will be needed and is recommended for these responsibilities.

In fire protection, reducing fire protection funds in fiscal year 1990 would not only seriously threaten the Federal Government's ability to use State crews when fighting wildfires, but also increase the taxpayers' cost to fight these fires and the State's abilities to have crews available.

During last year, 60 State crews involving over 1,200 people were dispatched to fires in the West; with the trends that we see now, the temperature and the weather conditions, it looks like we could have a similar situation in the year coming up.

Also in fire protection, we have the wildland urban interface problem. Simply speaking, this is the urbanites, the city residents, coming into the more rural areas, building residences in the wooded areas. West Virginia is encountering several woodland subdivisions, which is increasing the fire control problem.

Many of these are built in the woods with limited access, limited protection and presenting a serious problem. This is another area that both the Forest Service and the States need to continue working on. It's an extremely important project.

In the area of forest management, utilization of forest resource management with the major environmental and economic impacts being placed on our forest resources, this portion of the State and private budget needs a major increase.

The National Association is recommending a $15 million increase for forest resource management in the area of a stewardship initiative with the target of placing 25 million additional acres of forest under environmentally sound management plans.

In addition, we are recommending an additional $5 million be added for the funding and continuation of the marketing initiative which was funded previously.

Urban forestry plays an important role in public and private forestry programs and by managing and protecting their community, forests can increase the carbon dioxide uptake which will slow global warming and clean the air.

We are recommending a $2.5 million increase over last year's appropriation and this.

We also, in the area of forest research, the statistics, the recommendations which we have are in the testimony. I see my time is out. One of the important areas is in the forest inventory area; it's got to a very good level and we want to see this maintained at the level it is.

I thank you for this opportunity and your attention.

Senator **Burdick**. Thank you very much for your contribution.

STATEMENT OF KEITH A. ARGOW, PRESIDENT, NATIONAL WOODLAND OWNERS ASSOCIATION

Senator **Burdick**. Our next witness will be Keith Argow, National Woodland Owners Association.

Welcome to the committee.

Mr. **Argow**. Thank you, Senator. And we appreciate the opportunity to present outside information this year. I would like to take advantage of the advice actually of the committee and just highlight my comments and have the rest for the record; just make some points.

I am Keith Argow, president of the National Woodland Owners Association. I am 1 of 7 million private, nonindustrial woodland owners in the United States that account for 58 percent of the commercial timberland in this country.

The National Woodland Owners Association is relatively recent to Washington, having been here only 8 years, but we do represent members in all 50 States and now have 21 State affiliates.

The essence of my testimony is really highlighted in the explanatory notes in the President's budget with one chart, which is on the front page of my testimony.

That chart points out that already nonindustrial private woodlands are producing 50 percent of the Nation's wood. And in the future, that is where our return, our greatest return of growth is going to be, the commercial timberlands in the forestry industry and public timberlands are going to remain constant according to the projections of the Department of Agriculture, sustained by OMB.

It makes no sense whatsoever, as I have stated here, to eliminate the entire forest management and utilization appropriation as proposed in the President's budget. Plus wipe out a great amount of the cooperative fire program and the Forest Pest Management Program.

This year, if ever, with the dramatic input of the forest fires last summer, and particularly in the Yellowstone, we saw etched on national TV for late August and much of September the importance of the cooperative working association with the State forestry agencies.

State Forester Glover from West Virginia just pointed out the savings that occurred to the public as well as the many cotraining programs that were developed.

I have in my testimony several key points all the way down on the recommendations where we urge the committee to restore the funding, as this committee has done in the past. We acknowledge that and appreciate it.

One closing point that will come as a surprise to you coming from woodland owners relates to the land and water conservation fund and the freezing by the Secretary of Agriculture of all land and water conservation moneys now in the pipeline to purchase lands from willing sellers.

This has caused considerable hardship to willing sellers and while we note the construction projects can be started and stopped, that sometimes land acquisition procedures cannot.

We would ask this committee to look closely at that and see if there are not some better alternatives that could be more helpful to woodland owners and not put an undue hardship on them when they have negotiated in good faith with the government in negotiating.

With that, I am finishing in the green, intentionally, with the hopes that it will reserve a warm feeling for woodland owners here in Washington.

Senator **Burdick**. I yield to the Senator from Vermont.

Senator **Leahy**. I have no questions, Mr. Chairman. I'll just sit here feeling that warm glow.

Mr. **Argow**. Thank you.

Senator **Burdick**. I'm yielding.

STATEMENT OF ERIC GILBERTSON, VERMONT STATE HISTORIC PRESERVATION OFFICER, NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS

Senator **Leahy**. I appreciate the chance to do that. If we may go to the next witness, Eric Gilbertson, of the National Council of State Historic Preservation Officers.

Purely coincidentally, Mr. Gilbertson is from Vermont and that's why he's going next at this point.

Eric, come on forward, please. It's good to see you here.

Mr. **Gilbertson**. Thank you, Senator Leahy. And I thank the other members of the committee.

I want to thank you first for your past support for Historic Preservation Programs across the country. It's made a huge difference in the last 8 years that this committee would increase the appropriation from the absolute minimum of nothing in the last 8 years.

And, Senator Leahy, I remember some of the lessons that I learned at your downtown revitalization conferences, and those have been more than a decade ago now, and I hope we can do some more things like that.

The National Conference of State Historic Preservation Officers is requesting a total carryover to the historic preservation fund of $53.5 million; $45 million of that would go to the States; $35 million of that $45 million would be for basic program support; and $10 million would go to reinstitute the program of restoration and archaeological matching grants.

We recognize that this is an increase. We would also like to point out that the National Historic Preservation Act authorizes $150 million deposited into the historic preservation fund.

And as part of that recognition, we certainly acknowledge the budget constraints that we're all under.

Our Nation's heritage is really largely composed of a combination of our State and local heritage. And I think a partnership has been built over the last 22 years between the States and the Federal Government to save that heritage.

And I would like to see that partnership expanded and strengthened.

Our heritage is not just in the landmarks of the Nation, but in the small villages, the towns, the cities, the main streets, the farms that we all can look at.

We are in Vermont immersed in history and I would certainly think that every other State has a similar situation, where this is the history that we live with. It's not the history that we have to go into museums and see or learn from books; it's the history that's on our streets every day.

Let me talk a little bit about the need for the basic continuation of the basic and expansion of the basic program activities. We're requesting $35 million for this.

These are activities such as doing a survey of historic and archaeological sites, nominating properties to the national register, surveying projects under the Tax Act, and review of federally funded license or permitted projects.

The Federal Government contributes something less than 50 percent of the cost of these activities. And to get to a very specific example of how Vermont might use those additional funds, recently, the Vermont Legislature last year passed a law called Act 200, that mandates communities plan for their historic and cultural resources in the lands adjacent to them.

I would like to use additional Federal funds in Vermont to jump in and assist those communities with that planning and assure that the historic and archaeological sites are considered as part of the town plan.

In the future, I think this would lessen the battles over historic preservation. It would make people in communities think about this. It would be an excellent expenditure of money, in the long run, save our heritage and represent less expenditure.

My observations as I drive around Vermont of the past projects that have been funded through restoration grants is really one of thinking of the role of them in planning.

Restoration grants turn planning and ideas and interest into action. I think there's nothing like the incentive of a few dollars to start the town, a town on the right way.

And I'd like to talk about a couple of examples.

In Rutland, a city in western Vermont of a population of about 20,000 people, the division invested $474,000 in Federal funds based on a preservation plan. And that sounds like a lot of money, but this investment generated over $4 million in additional private investment. Property assessments in the project area have increased by over $1 million.

And the city of Rutland is collecting $53,000 a year in additional revenue. This means that the city of Rutland has collected in revenue in the last 10 years well over the total cost of the Federal investment.

In St. Albans, a small city in northern Vermont, a preservation plan, a national register nomination, followed by grants and Tax Act projects restored six buildings in the business district and around the city park.

In 1983, the mayor was able to raise $30,000 to match the challenge of a jobs grant award to rehabilitate the city hall. He did this in just 2 days.

I think that's a significant indicator of what the interest in historic preservation is in St. Albans. As a matter of fact, the reason I'm in Washington today, one reason I'm in Washington today, is to work on a Tax Act project and appeal for a Tax Act project in St. Albans.

Another town in Vermont, Hardwick, 1981, Hardwick was full of abandoned buildings and fraught with a lack of housing, a vacant industrial park and it had a rough reputation.

The city manager, Tom Manager, had enough foresight to request funds for a preservation plan. And that plan was done. There was a combination of historic preservation grants, Tax Act projects, housing rehabilitation grants that made Hardwick into a different place. It looks better now than it has in 50 years.

A new branch of a department store is open and the town celebrates its history by raising funds for the restoration of the railroad station. Hardwick is truly a different place than it was 10 years ago.

Two years ago, the National Conference of State Historic Preservation Officers conducted a survey concerning the need for preservation grants. They found that there was a need of about $1 billion out there; $2 million of that was in Vermont. That sounds like a monumental task to tackle with $10 million a year, but I would say that, in Vermont, is an example of how small grants can really do a lot of good.

In 1985, our new Governor asked that $25,000 be put in the budget for grants, historic preservation grants for communities and nonprofits to get ready for Vermont's 1991 bicentennial.

So far, $225,000 have been granted on that program because the appropriation has been increased each year, but this has been matched by over $600,000 in town and private funds.

We funded 74 projects in 54 towns in all 14 counties in Vermont. But we had to disappoint over 200 applicants who had requested almost $1 million.

Senator LEAHY [presiding]. Mr. Gilbertson, today is one of those rare instances where I think the acting chairman is aware of the places you're talking about, and I have seen them. I know you speak of your roots and a number of places around the country of your family's roots, in Wisconsin, Minnesota, Illinois, Indiana, New Mexico, Wyoming. And I think in all those States we can see much the same.

I'm very proud of what you've done in my own State of Vermont. I was born there 48 years ago and I've seen so many changes during that time. Some of the things, that today we would give anything if they could have been preserved, were torn down prior to the preservation movement.

Our capital city of Montpelier, the old train station, where now you have a fairly ugly building, automatic teller and parking spaces. The post office, a beautiful old, turn of the century building that was torn down and was replaced with something that looks like the utilitarian inside of a men's room, which somebody probably took off the shelf. And other such things.

But, on the other hand, we look at some of the very beautiful things that have been saved: the old custom house in Burlington, the fire station, some of the buildings within the State House complex, and places up and down the State, not only allowing us to understand some of our own history, but in most instances being better than what could have been built anew.

It's been more job-intensive, more for our money, and has given us a sense of roots and community. So I applaud what you are doing. As you know, you speak to the converted when you speak of historic preservation funds to me, and I think to many in the Senate—in both parties. And we'll continue to work on that.

But, if it wasn't for people in the individual States in all our States and local communities doing it, there's nothing that we can mandate from Washington to tell a community in Wyoming or Montana or Vermont or Illinois or anywhere else what is appropriate and proper and best to preserve the past. But the communities working together can.

And I applaud you for it. I thank you for being here.

Mr. GILBERTSON. Thank you very much. It's good to see you. And when are you going back?

Senator LEAHY. Tomorrow evening. I may even see you on the plane.

Mr. GILBERTSON. The next day I'm going up to Vermont for the week.

We appreciate the opportunity to come and your presence at the hearing.

Senator LEAHY. Thank you very much, Eric.

STATEMENT OF BUD KAUFMAN, PRESIDENT, CROMAN CORP., THE TIMBER ASSOCIATION OF CALIFORNIA

Senator LEAHY. The next panel, or next group we'll take as a panel, and Mr. Crites, Jim Riley, Faye Fisk, Bud Kaufman, David Ford, and Joe McCracken.

Because we are running behind, what I would do is this. Let us set the clock for 25 minutes and I'll leave it to you to divide it up.

So, in other words, if the first person takes 24 minutes, that leaves 1 minute for the others.

I don't want anybody to feel any pressure on them as they start, but we'll go: John Crites, Jim Riley, Faye Fisk, Bud Kaufman, David Ford, and Joe McCracken.

Mr. CRITES.

Mr. KAUFMAN. Yes, sir; I'm Bud Kaufman. I am the first member of the panel.

Senator LEAHY. I'm sorry. Mr. Kaufman.

Mr. KAUFMAN. We're in a little different order than you have there.

Senator LEAHY. Whatever way you want; it's your panel.

Mr. KAUFMAN. My name is Bud Kaufman. I'm the president of Croman Corp., and from Ashland, OR.

I'm testifying today on behalf of the Timber Association of California, in Sacramento.

The purpose of our panel is to convey how crucial the timber supplied from our national forest is meeting the nation's demand for our wood products. My part of the message is pretty straightforward:

Demand for our U.S. wood products at home and abroad will continue at very historically high levels, and the only constraint for supplying these growing wood needs is our timber supply.

Despite occasional periods of foreboding signs, the economy continues to grow in real terms. The economy will maintain a 2 to 3 percent growth and the prospects of a major downturn for wood products is lessened because of small, strong fundamentals, continued high demand

Housing starts number just over 1.5 million units in 1988, which is down from recent years. However, the decline has been principally in multifamily units. Single-family starts have been exceeding 1 million units per year.

These new homes are also using more wood because they're larger and they contain more wooden materials. Repair and remodeling now accounts for nearly one-third of all softwood lumber demand. It just compares with less than 20 percent just a decade ago.

And this market for wood products has been growing at well over 10 percent per year in constant dollars.

It's not likely to let up given America's aging housing stock and maturing population. Seventy-four percent of the housing inventory was built over 20 years ago.

The combination of steady housing markets, rising expenditures on repair and remodeling should keep wood demand elevated well into the 1990's.

On exports, with 11 months of trade data available, the value of U.S. exports for solid wood products has already exceeded last year's $4 billion. When the numbers are in, 1988 will set a new export record with exports valued at approximately $5.3 billion.

The volume of softwood lumber, exports alone in 1988 increased better than 36 percent to over 3 billion board feet. Similar gains were experienced in all wood product categories. Wood products exports have made a major contribution to U.S. trade balance.

U.S. exports of solid wood products should continue to grow. Current projections are for exports to increase an average of 10 to 15 percent annually through 1994. Greater volumes of lumber and value-added wood products will be exported. Expanding export trade coupled with stable and declining imports could make the United States a net exporter of wood products throughout the 1990's.

Given these factors, the United States should remain in a position to compete as a low-cost efficient world producer. However, the rational, sufficient timber supply program for the national forest is the lynch pin for this entire scenario.

Of particular importance is the fact that the Pacific Rim holds the most significant overseas market for our U.S. products. Well over 70 percent of all softwood exports originate in the Pacific Northwest.

The timber sale program has fallen way short given the existing and potential needs of our marketplace. Backlog of uncut timber under contract is at a historic low. As a consequence, timber costs are increasing and they threaten the viability of our Western mills in particular.

It would be a travesty if insufficient timber supply were to trigger a recession in the Pacific Northwest. But that is a real and avoidable possibility.

Given the demand which can and should be supported by U.S. producers, the subcommittee should recognize the desirability of the larger timber sale programs.

I appreciate the opportunity. I'll respond to questions either now or at the end.

STATEMENT OF FAYE FISK, FOREST RESOURCE ANALYST, STONE FOREST INDUSTRIES, INC.

Senator **Leahy**. Ms. Fisk.

Ms. **Fisk**. Good afternoon. My name is Faye Fisk. I'm with Stone Forest Industries in Flagstaff, AZ. And I would like to address the continuing trend of harvest levels of out-pacing timber sale offerings, the effects of raw material shortage, why lifting the export ban on Forest Service and BLM logs is inappropriate.

And, finally, why mills are closing while demand continues to set records.

Harvests of Forest Service and BLM timber continue at record levels fueled by increasing domestic and international demand for wood products.

Harvest levels on national forests reached 12.6 billion board feet in fiscal year 1988. This is second only to the all-time harvest record reached in fiscal year 1987.

We expect harvest levels from national forests during fiscal years 1989 and 1990 to continue and exceed 12 billion board feet.

Harvests on BLM's Oregon and California lands increased 26 percent last year. To meet demand, purchasers are cutting timber under contract at levels substantially greater than the Forest Service and BLM timber sale offerings.

When we testified before this subcommittee 1 year ago, we reported that on a national basis there was 25.1 billion board feet of Forest Service timber remaining under contract to be harvested. By the end of fiscal year 1988, that volume had reached—or dropped—to 21.8, which is only a 21-month supply.

This is the lowest level in history and the trend is heading downward.

BLM volume under contract has declined 59 percent over the last, past 5 years. In many parts of the country, operators are faced with only a few months of volume under contract. Some have only weeks, and others have already run out of logs.

Mill owners consider a 2 to 3 year supply of timber under contract a minimum to accommodate market changes and to secure investment capital. Over the past 4 fiscal years, stumpage prices for both harvested and sole Forest Service timber have steadily risen nationwide.

The average stumpage price bid for national timber has risen 120 percent between fiscal years 1985–88. These increases in stumpage prices are directly attributable to log shortages. As a result of the 1986 United States-Canadian softwood lumber agreement, imports of Canadian softwood lumber have stabilized over the past 2 years. However, Canadian softwood lumber imports may increase in the near future for several reasons.

As Forest Service and BLM stumpage prices rise more rapidly than finished product prices, these increases are due in part to inadequate timber supplies on our national forest and BLM lands. As those lumber prices rise in response to rising stumpage prices, United States producers are placed at a disadvantage relative to Canadian producers.

Canadian producers can under-sell United States producers allowing Canada to recapture an increased United States softwood lumber market share. In this light, the administration's proposal to repeal the ban prohibiting the export of logs harvested from Federal land is poorly conceived and could not have come at a worse time.

The implications of the administration's proposal have not been thoroughly analyzed. Lifting the log export ban will reduce the supply of logs available to domestic producers. This will push stumpage prices even higher in the Pacific Northwest, forcing additional mills to close.

In summary, demand for forest products remains strong. In recent years, the U.S. forest products industry has invested heavily in modernizing its operations to remain competitive in the world market. However, these mills now face significant raw material shortages due to low volumes under contract and inadequate timber sales programs.

I appreciate the opportunity to testify and I'd be happy to answer any questions that you have.

Senator LEAHY. Thank you very, very much.

STATEMENT OF JAMES S. RILEY, EXECUTIVE VICE PRESIDENT, INTERMOUNTAIN FOREST INDUSTRY ASSOCIATION

Senator LEAHY. Mr. Riley.

Mr. **Riley**. Mr. Chairman, I'm Jim Riley. I'm from Coeur d'Alene, ID.

Senator **Leahy**. Good to have you here.

Mr. **Riley**. Thank you, sir.

Ms. Fisk's statement does an accurate job of describing the pending crisis that our industry faces due to the deterioration of timber availability from Federal lands. One of the reasons for this deterioration is because of the proliferation of environmental and administrative appeals that have been filed against Forest Service timber sale activities.

My statement reviews the causes and some of the ramifications of this problem in some detail. Although I firmly believe this matter deserves the attention of the authorizing committee, it also has some direct implications that require this subcommittee's attention as well.

Let me just highlight a few statistics, if I might. The number of appeals is up significantly, increasing nearly 600 percent between 1984 and 1988. At the same time that the number of appeals goes up, the Forest Service's ability to process appeals seems to be decreasing significantly, with additional, significantly more time required to process appeals today than just a few years ago.

More alarming is the amount of discretionary resources that the agency is now committing to managing the appeals process rather than managing the resources on the ground. A conservative estimate in fiscal year 1988 was that the Forest Service spent nearly $6 million just to process administrative appeals.

The administrative appeals burden has had a dramatic impact on Forest Service programs. My statement provides several statistics in this regard, but the most important of which is that in Montana, one of the States I represent, fully one-third of the scheduled timber sale program was delayed in 1988 due to appeals and litigation.

As a direct consequence, the Forest Service will report to you that in 1988 they failed to meet the targets appropriated by this committee with significant shortfalls in Forest Service regions I, VI, and VIII.

Our industry is also feeling the direct result of the appeals crunch. Sixteen mills have closed in the past year, with some more just recently, last month, simply because of the inability to obtain the necessary timber to run their facilities.

Our association, in cooperation with NFPA, committed a survey of member mills. What we found is that an alarming percentage of them now face curtailment or disruptions in their normal business because of appeals and the unavailability of timber in that regard.

More alarmingly, we find that needed investments, capital investments in our plants and our facilities have been deferred because of the inability to find timber to run the mill.

The result and the direct result for this committee is that the Forest Service timber sale pipeline, or the advanced preparation work for the Forest Service to provide timber sales is woefully empty today. We need attention paid to restoring the orderly process for the Forest Service to execute its timber sale program, and also to do so in advance.

Thus, we bring before you today two funding priorities for the Forest Service's 1990 program. First is the request to finance new timber sale levels at the levels which would be necessary to meet current demand; and, second is to finance advance preparation work which would be necessary for the Forest Service to refill the timber sale pipeline and to get in front of dealing with the appeals problem.

Thank you very much for this opportunity to testify.

Senator LEAHY. Thank you very much.

Could I, without going into the time of the panel, and this will not come out of your time, I would like to yield to Senator Wirth of Colorado, who has a statement to make. And we will add on the time Senator Wirth takes.

INTRODUCTION OF SENATOR WIRTH

Senator WIRTH. Thank you very much, Mr. Chairman. I just wanted to take the opportunity to introduce witnesses who are going to be coming a little later, Mr. Ernest House, who is chairman of the Ute Mountain Indian Tribe, and Mr. Leonard Burch, who is chairman of the Southern Ute Indian Tribe.

I think you all are familiar with the long-time discussion that we have had for many, many years on the agreement reached between New Mexico and Colorado and between those States, the Indian tribes and the Federal Government are related to the Animas-La Plata issue.

It's a very complicated agreement and a very important one, as it focuses on the settlement of some severe water rights issues. And in return for that settlement, the Indians have agreed not only to development funding coming to the tribes, but also to the development of economic incentives and the Animas-La Plata water project.

They're here to discuss that with you, Mr. Chairman, and I know that you're familiar with that. The committee's familiar with it. We've all been through this year after year. We finally reached a resolution last year legally and now we are hoping that we're going to see a commitment of funds from the Federal Government.

Unhappily, the agreement that was reached by the Reagan administration was effectively abridged in their budget. They violated that agreement by not asking for the funding that they had said they were going to as part of the overall package. But we are hopeful we will be able to turn that one around.

Mr. Chairman, we all appreciate very much the help and assistance of the committee and if it's all right with you, I would like to ask Mr. Ray Kogovsek at the appropriate time, the former Congressman, if he might join Mr. House and Mr. Burch at the witness table.

Senator LEAHY. Of course. And I might also note for the record that Senator Wirth has been indefatigable in making sure that all members are aware of the agreement, and has been very, very careful in watching out for Colorado's interests and New Mexico's interests. He's been very good in the people's interest.

Senator WIRTH. Thank you very much, Mr. Chairman.

Senator LEAHY. We appreciate it. Thank you, sir.

Senator WIRTH. Thank you.

Senator LEAHY. Yes, sir.

STATEMENT OF JOHN CRITES, PRESIDENT, ALLEGHENY WOOD PRODUCTS, INC., WEST VIRGINIA FORESTRY ASSOCIATION

Mr. CRITES. Mr. Chairman, my name is John Crites. I'm president of Allegheny Wood Products from Petersburg, WV. I'm here to describe industry's recommendations for Forest Service and BLM timber sales programs for fiscal year 1990.

In making our recommendations, we surveyed each region to determine the level of timber sales needed to maintain the industry. We considered current and future demand, Federal and private volume in the contracts, availability of non-Federal timber, land management planning targets and the ability of the agencies to prepare and offer timber sale volume during the next year.

After summing the regional requirements, we believe a National Forest Timber Sales Program of 13 billion board feet is appropriate to meet the current levels of demand for fiscal year 1990.

In the eastern region, which is where I'm from, all forest plans are final. Together, they provide an allowable sales quantity of 897 million board feet. Even though the forest plans do not fully reflect current or future demand for national forest timber, recent appropriations have been significantly below forest plan goals.

Congress has not fully funded the region's allowable sale quantity even though the sale of high-quality, hardwood veneer and soft timber represents some of the most profitable timber sold by the Government.

The Forest Service has not been able to maintain the national timber sales program at levels which meet demand. However, no matter how much money is spent to prepare sales, the agency will only be able to prepare an offer of about 11.9 billion board feet. This is due largely to both timber sale appeals and the large amount of time spent fighting fires.

We recognize the dilemma that the Forest Service is in. Therefore, our recommendation to the subcommittee is to provide funding for the Forest Service to prepare and offer 11.9 billion board feet.

In addition, we urge the subcommittee to provide $75 million for advanced sale preparation work to replenish the timber sale pipeline.

We'd also recommend funding for the BLM at a level of 1.7 billion board feet.

Now, let me——

Senator LEAHY. You're talking 1.7?

Mr. CRITES. 1.7 board feet.

Since I am from West Virginia and that is the area that I know the best, let me talk specifically about West Virginia and some of our problems.

First of all, I would like to commend this committee for their funding of the Gypsy Moth Program and encourage the continuance of this funding. It's very important and, as you know, West Virginia is on the front edge of the march of the gypsy moth.

My company is surrounded by the Monangahela National Forest and we built there about 17 years ago because of the nearby timber supply from the National Forest. Some of the finest hardwood timber growing in the world grows on the Monongahela National Forest in West Virginia.

However, over the last 5 years, the National Forest timber has made up less than 5 percent of our total harvest per year. In West Virginia, the State government is providing incentives to encourage the growth of the forest industry. This has resulted in an increase of wood product sales from $340 million in 1984 to in excess of $1 billion today.

The State expects this to reach $2 billion by 1994 and, in fact, sales of $3 billion are a realistic goal that can be sustained by forest resource.

It's frustrating that on one hand, the State is encouraging forest industry growth. This is to increase our tax base and to provide employment, which is greatly needed in our State.

But, then, on the other hand, the Forest Service is standing in our way. They are, in fact, only cutting 15 percent of the annual growth in the hardwood regions.

If we are to continue to grow and prosper and meet the very high demand for hardwood timber, both domestic and export, then it is absolutely essential that the National Forest play a larger role in providing our soft timber needs, a role of cutting timber closer to the amount that is growing.

Unless something is done to ensure that the public lands will be a reliable source of timber, the forest products industry, especially in our area, will be faced with mill closings and employee layoffs. This is not what we need for West Virginia.

I certainly appreciate this opportunity to testify and would be happy to answer any questions.

Senator Leahy. Thank you very much. And I know that the chairman of the subcommittee, and also chairman of the full committee, Senator Byrd, will be especially interested in seeing your testimony.

I'm going to turn the gavel over to my distinguished colleague from Alabama, the senior Senator from Alabama, Judge Heflin.

Senator Heflin [presiding]. I'm delighted to try and be of help and assistance to the committee here. Everybody in the Senate has got 15 things to do at the same time. And so while I'm not a member of this committee, nevertheless, I'm glad to try to help at this time.

Well, you all go ahead and testify.

STATEMENT OF DAVID FORD, NATIONAL FOREST PRODUCTS ASSOCIATION

Mr. Ford. Good afternoon, Mr. Chairman. I'm David Ford with the National Forest Products Association. I'm sitting in this afternoon for Mr. Ardis Almond of Coushatta, LA, who had a catastrophic illness in his family and is sorry that he was not able to be here today.

I will discuss the profitability from the timber sales program and the Forest Service's new accounting system.

Forest Service Timber Program receipts exceeded expenditures by $476 million last fiscal year. Expenditures were $444 million, while program revenues exceeded $920 million.

The program also generated $302 million in 25 percent fund returns to local counties for schools and roads.

The 1987 trial run of the new Forest Service accounting system, the timber sale program information reporting system, referred to as TSPIRS, confirms the profitability of the timber sale program.

The TSPIRS national report shows that the timber program generated $540 million in receipts above costs in fiscal year 1987. We have thoroughly reviewed the TSPIRS system and the 1987 trial. Our analysis is contained in four booklets attached to my testimony.

There are several improvements needed in the system and I'd like to bring those to your attention today.

First, TSPIRS cannot explicitly display the cost of processing and resolving timber sale administrative appeals and litigation. Appeals and litigation are initiated by the public, so these costs are largely outside the Forest Service's control. Currently, the costs are collected only at local discretion and they are usually lumped with other sale preparation costs.

Second, general administration costs are over-allocated to the timber program. These costs are similar to fixed costs, including rent and utilities, administration and support staffs. This is especially a problem on National Forests where sales are designed primarily to benefit nontimber resources.

Finally, the system cannot track a reduction of timber revenues caused by harvesting restrictions and environmental constraints. Purchasers reduce their bids to accommodate these constraints. The lost revenues are not assessed by TSPIRS.

To completely understand the National Forest Timber Program, each of the three TSPIRS reports must be examined. One TSPIRS report cannot be favored over another as each provides important information.

These reports must be considered in relation to prior years, and past variations in timber markets can have an impact on TSPIRS results long after those markets have changed.

The reports also must be evaluated in relation to local forest conditions and forest land management plans. During the 1987 TSPIRS trial, many National Forests performed poorly on the financial evaluation. On these forests, the agency was often salvaging debt and burned timber or storing low value stands to their full-growing potential.

These investments will not provide immediate return to the Treasury. However, they will pay off in the long run.

Last year, this subcommittee recognized the strength of the Forest Service Timber Program by transferring $73 million in excess receipts back to the agency to enhance National Forest recreation, fisheries and wildlife and timber programs.

We urge the subcommittee to adopt this appropriations amendment again this year and extend it to the Bureau of Land Management as well.

The excess receipts program, supported both by industry and environmental groups, demonstrates how the timber program can support nontimber resources. However, reductions in the Forest Service's timber sale preparation level will reduce the effectiveness of this program.

The current strong market for Forest Service timber provides an opportunity to lock in strong timber revenues for future years. We encourage this subcommittee to take advantage of this opportunity.

In closing, I would like to stress four points. First, the Forest Service Timber Program makes money.

Second, the TSPIRS system confirms the timber program is profitable.

Third, TSPIRS, while still needing further refinement, is a great improvement over earlier systems used to evaluate the Forest Service Timber Program.

Finally, this subcommittee has an opportunity to continue the excess receipts of transfer and investment program begun in fiscal year 1989 by providing an ample level of funding to the Forest Service Timber Program in fiscal year 1990.

Thank you. And I would be happy to respond to any questions either now or at the conclusion of this.

STATEMENT OF JOSEPH McCRACKEN, EXECUTIVE VICE PRESIDENT, WESTERN FOREST INDUSTRIES ASSOCIATION

Mr. **McCracken**. Mr. Chairman, I'm Joseph McCracken, president of Western Forest Industries Association, Portland, OR. Our association represents lumber and plywood manufacture in Western States, all of whom are very dependent upon Federal timber to run their mills.

I would just make a comment on the old growth management situation in the west coast. It's in the statement that I have filed. And then I will very briefly summarize some of the things I think have come out of this panel.

The industry is very supportive of the program which the appropriations committees instituted in this fiscal year, which the Forest Service is carrying out on the west coast to evaluate an inventory and try to sharpen up the definitions of old growth timber.

In preparation for any decisions which the Government, including the Congress of the United States, may wish to make in the years ahead, it will be very important on an issue of this significance, an issue which is contentious, that the best possible data be available for those kinds of decisions. And we support continuation of this inventory effort.

In terms of summary, you heard first about the demand for wood products in the United States. It's very strong. It's been strong for many years, and it continues to be strong.

I would only add that the off-shore demand for our wood products is also strong and is growing in very dramatic percentage increases, both lumber, plywood and wood chips and pulp and paper products. Very strong demand.

In that context, we then turn to supply of timber and you've heard that the volume of timber under contract from Federal lands has been going down dramatically and closely affiliated to that, in the last year, 26 plywood and lumber mills in Oregon and Washington have closed permanently.

Mr. Riley mentioned 16 in the northern Rocky Mountains. In addition, many mills are curtailed or down now temporarily because of log shortages.

The result of this, I would say, reminds me for the first time we're seeing signs now, for the first time since the spring of 1973, when plywood and lumber prices became chaotic in this country, which led to a march on Washington by the National Association of Homebuilders to deal with this problem.

We're beginning to see perhaps signs of that reoccurring in 1989.

The problem is supply. The volume under contract is going down. And I want on behalf of our association and all of us to support the program which Mr. Crites recommended to the committee in his statement.

My last comment has to do with the BLM timber in western Oregon. You will hear, I know, from Senator Hatfield about this. And when the Interior Department witnesses are before you, I know they will talk to you about it.

But, as a result of a court injunction, there was a major hiatus in the BLM timber program in western Oregon this past year. That injunction has been lifted by the courts. And the Bureau of Land Management is now trying to get back into the full timber program. They are clearly going to need more money to do that than is in the President's budget.

It's an area where the cost benefit ratio will be an enormous benefit to the Government. As I say, you will hear about that from others. And I know you will from Senator Hatfield.

On behalf of the entire panel, I thank the committee for the opportunity to testify.

Senator **Heflin**. Thank you. We appreciate your testimony. I might say—promote one of my bills. I've got what is known as a farmers recovery tax bill that would reinstate to farmers and to individual timber owners capital gains differential on the properties that they own.

When the tax bill was adopted, the big companies got a capital gains differential, but the small timber owners and the individual timber owners had their capital gain differential destroyed.

And knowing from my State of Alabama, where we have forestry still as a major part of our economy, that the restoration of capital gains differential would be very important to the forestry industry.

And as anybody knows, it takes a long-time investment. I read this morning where they're talking about a 3-year investment, advocating that.

Well, in forest products, it's anywhere from 15 to 50 years in regards to what your investment is before you could take advantage of a capital gains if you were to be able to do so.

So I urge you all to look at my bill and give me a little support. I need some support relative to that.

Thank you. We appreciate you very much.

STATEMENT OF DR. R. BRUCE TIPPIN, DIRECTOR, MINERAL RESOURCES INSTITUTE, UNIVERSITY OF ALABAMA

Senator **Heflin**. Next I'm pleased to welcome Dr. Bruce Tippin, a professor at the University of Alabama, the Mineral Resources Group. The University of Alabama Mineral Resource Institute focuses a major part of its basic and applied research efforts on fossil fuels, especially on the utilization of eastern oil shale as an alternate energy source.

Scientists at the University of Alabama believe that the oil shale is a viable component in the overall energy base of the country; therefore, I think it is very important that we hear this vital testimony from Dr. Tippin. I'm sure that he will give us some insights regarding the research program dedicated toward developing this petroleum source.

This energy source has potential to provide a large domestic supply of high-quality crude. Also, the eastern oil shale resources are located in areas close to major oil refining capabilities existing distribution systems in a dense population market.

It's a pleasure for me to recognize Dr. Bruce Tippin, a professor from the University of Alabama. Dr. Tippin.

Dr. TIPPIN. Thank you, Senator. As was mentioned, I am director of the Mineral Resources Institute at the University of Alabama. We conduct minerals and energy research as well as assist in the education and training of the minerals engineers.

During the past 8 years, the university has conducted research, technology that was tailored especially for the oil shales that underline most of the Central and Eastern United States.

The research has included such items as physical beneficiation, chemical extraction and retorting techniques for the energy recovery from the shales.

Early in this investigation, the Mineral Resources Institute made a major breakthrough in upgrading the shales by physical beneficiation.

MRI, as we are known, is now recognized as the leader in beneficiation of eastern oil shale, and perhaps in the world.

This subcommittee was a key factor in establishing a Federal Eastern Oil Shale Program. Before the congressional action was taken to fund research on this important energy source, very little was known about the eastern oil shales.

Now these deposits are part of our national energy base. Eastern oil shale research has now been initiated for the expansion of the fossil fuel data base, for hydroretorting studies, preconcentration by beneficiation to identify the chemical composition and the reactions of the shales.

This program is now proceeding under the sponsorship of the Department of Energy. And it is our view that $8 million of funding should be provided in fiscal year 1990 to continue this research and develop the eastern oil shale technologies.

The MRI research has been directed toward upgrading the shales by flotation. This is a standard mineral processing technique. Over 90 percent of the mining operations in this country beneficiate our Nation's deposits by this method.

The MRI flotation research conducted under the DOE contract has shown that the technique is applicable to almost all eastern oil shale.

Although flotation does not in itself produce a marketable oil product, it can be used as a preconcentration step in oil recovery process. In this manner, it reduces the amount of material that has to be concentrated by the retorting.

In addition to the preconcentration step as it is used reduces the followup retorting plant cost. This is a high and expensive process, the retorting. Reducing this cost is not only important but helps for the general economics. It reduces the sulfur content of retorted shale going through that section of the plant, in addition.

By approaching the energy utilization of the eastern oil shale, by a systems concept, the economics of processing eastern oil shale is enhanced and the environmental aspects improved.

By systems concept, we mean the mining, the preconcentration, the retorting and all of its auxiliaries.

In this systems concept, a multidisciplinary team has been formed and is presently conducting coordinated research to develop pressurized fluid bed hydroretorting. This is a new and an innovative oil shale technology.

The lead on this is handled through the Institute of Gas Technology and was developed by them several years ago. In addition to the Mineral Resources Institute at the University of Alabama, there's the University of Pittsburgh, Tennessee Tech, University of Michigan, University of Ohio, and Illinois Institute of Technology.

This imminent group of research specialists are examining all aspects of the technology, including gas clean-up, environmental mitigation, oil upgrading, and preconcentration.

The beneficiation at the Mineral Institute has come a long way since its start. The test work has now shown that there are seven different oil shale samples that were taken and this concentration method is adaptable to all of them.

The initial test work showed that the eastern oil shales, although they have only 10 gallons per ton in the ground, we were able to upgrade it to 24 gallons.

With recent and new innovative flotation methods, we are now receiving concentrates that exceed 50 gallons per ton and we have improved the flotations over 90 percent.

The optimization of this process is continuing with emphasis on reducing the cost. The research results on the fluidization and the beneficiation have been very encouraging and the indications are that this process will be very economic and probably the most reliable for processing oil from the eastern shales.

To advance this technology before the bench test work and conceptual, it is necessary the process be demonstrated on a continuous scale.

We recommend a 4-ton per hour movable process unit, which includes beneficiation, to be designed, constructed and operated on various eastern oil shale sites.

The first site that we have anticipated is in the northwestern section of Alabama.

We support IGT's recommendation for $8 million to develop this technology. Of this, $3 million will be used to continue the research on fluid bed; $1.5 million on the design of the demonstration unit.

The University of Alabama strongly urges the DOE eastern oil shale program be continued and the improvements that we have made and the advancements we have added to the technology base of this nation have been significant.

I thank you.

Senator HEFLIN. Dr. Tippin, when OPEC caused much higher prices in oil several years ago—whenever I first came to the Senate—there was considerable interest and discussion as to the alternate sources of energy. We recently have not had as much newspaper coverage, media coverage, discussions about that. The price of oil has gone down.

But there is a danger that OPEC and others will make us turn toward alternate sources of energy. The technology that you have testified about, is this a technology that could be rapidly put into force, into effect, over—well, rapidly, of course, is a relative term.

But is the technology such that it could be very helpful if we are faced with an oil shortage into the future coming from foreign sources where we still depend on more than 40 percent of our needs in the United States?

Dr. TIPPIN. Yes, sir; and we feel that the Eastern part of the United States is able to respond more quickly to the technology from the standpoint of it has the water, it has the people, it has the distribution system, it is more favorably inclined to this type of mineral processing because of experience that the East has had with cold.

Senator HEFLIN. Would you tell us a little bit about the Alabama Mineral Resource Institute?

What do you do there?

Dr. TIPPIN. The institute itself was established around 10 years ago, and it emphasizes minerals research, primarily in the fossil fuels. We have a major program in the educational program of the University. We have graduate and undergraduate students.

We are one of 32 mineral institutes around the country. Last year, I served as director of that group. We feel like minerals is an important segment of this country's power base and its strength, and I'm proud to be part of it.

Senator HEFLIN. Well, thank you, Dr. Tippin. We appreciate your testimony.

Dr. TIPPIN. Thank you, Mr. Chairman.

SOUTHEAST FISH CULTURE LABORATORY

Senator HEFLIN. While I'm in the chair, and this is on miscellaneous matters, I'd like to testify, there being no objection—of course, there's nobody here to object—as to the effect concerning the Southeastern Fish Culture Laboratory, which is located at Marion, AL. And I have a statement here that I'd like to be entered into the record pertaining to the good work that the Southeastern Fish Culture Laboratory in Marion, AL does, and particularly important to us in the catfish industry, because Alabama has now become a large catfish producer. And people are eating catfish more. They've learned how delightful, what a great dish it is.

And I advocate to all of you there: Eat more catfish. [Laughter.]

But the research is certainly very helpful to it, and I'd like to enter this as a part of the record if there is no objection.

STATEMENTS OF:

KATHRYN TOLLERTON, ASSOCIATE CONSERVATION DIRECTOR FOR GOVERNMENT RELATIONS, DEFENDERS OF WILDLIFE

JOHN FITZGERALD, DEFENDERS OF WILDLIFE ON ENDANGERED WILDLIFE PROGRAMS OF THE FISH AND WILDLIFE SERVICE, BUREAU OF LAND MANAGEMENT, NATIONAL PARK SERVICE, AND FOREST SERVICE

Senator **Heflin**. We have called Ms. Kathryn Tollerton and John Fitzgerald, Defenders of the Wildlife, who would like to testify.

Ms. **Tollerton**. Thank you, Mr. Chairman. I'm Kathy Tollerton from Defenders of Wildlife. First, I'd like to thank the committee and the Members of the Senate for the strong support they've given in the Interior appropriations bills in recent years to the programs which enhance and protect wildlife and habitat.

I will deal with two issues in my testimony. The first issue deals with the Fish and Wildlife Service's Division of Environmental Contaminants. This is a program in an area that the Fish and Wildlife Service in recent years has increased its work because of the studies and the growing threat that we have seen to wildlife from all kinds of toxic contaminants in both habitat and waters, caused both by agricultural and industrial and other sources.

We recommend the total of $5 million increase in the budget of the Division of Environmental Contaminants. The first $500,000 of that would be a restoration to continue the 10 people that have been hired with fiscal year 1989 money to increase the number of field staff working on contaminant problems.

This involves university-trained scientists going to the field in wildlife refuges in your State and other parts of the country and assessing the problems that various kinds of toxics in the soil or in the water are having on wildlife and then making determinations about what the Fish and Wildlife Service needs to do about this, or what measures need to be taken by other Federal agencies were maybe responsible for it.

In addition, we would like to see another million dollar increase and an additional 10 people to continue the work that's being done on what's called field bioassessment techniques.

This involves exposing animals and fish directly to soil, water that is believed to be contaminant, finding their reactions.

All of the testing of the reactions of wildlife to chemical contaminants is very new. I stress that the work that EPA does is almost exclusively to test what? The reactions and the problems are from these pollutants, but very little work has been done to date except the little bit that's being done in the Fish and Wildlife on the wildlife problems.

In addition, we would like to recommend a one-half million dollar increase to establish a national contaminant biomonitoring program in the environmental contaminants division; $1 million increase to conduct natural resource damage assessments under the Superfund law to carry out the Fish and Wildlife Service's responsibilities there. And then, finally, $1.5 million to initiate a wetlands protection and enhancement program in this division.

This would deal with the effective dredge/spoil, irrigation water pesticides and some other threats to wildlife, on the wildlife, in wetland areas under the Fish and Wildlife Service's jurisdiction.

The second item briefly would recommend an increase in the cooperative fish and wildlife unit budgets of $800,000. This would serve to expand work started 2 years ago in the co-op unit in Idaho in mapping biological preserves to determine the extent of richness of biological communities.

This would be plant life, trees, other forms of wildlife. The work was expanded with a special initiative in last year's appropriations bill and now we would like to see it worked out nationally and the end product would be a national inventory of gaps in biological preserves.

This concludes my part of the testimony.

Mr. **Fitzgerald**. In the remaining 30 seconds, I'll summarize my testimony.

Thank you for the opportunity to testify, Mr. Chairman. With your cooperation, we managed to move after 4 years the endangered species reauthorization amendments, last October, and have them signed into law at that time.

We appreciate that resolution. And my testimony is primarily devoted to ensuring that the amendments made at that time are adequately implemented and the funds are there to do that, ranging from candidate monitoring—that is, monitoring species not yet listed but nearly ready to list; an appropriate section 5(a) program, which was one thing that was not subject to amendment but has never been done. That is, mapping and planning for wildlife conservation nationwide, concentrating on endangered species, but not just for endangered wildlife.

And then I see the time is up. I'll leave it up to the record.

Senator **Heflin**. Well, go ahead. Go about 1 minute longer will be fine.

Mr. **Fitzgerald**. Thank you, Senator.

Under recovery, the Service says that they intend to cut funding for many species recovery work, including sea turtles that are near and dear to our hearts. And we would like to make sure that that work is restored because no one has any problem at all with helping protect their beaches and hatching facilities.

The law enforcement section ought to be augmented by additional people. And, in addition, funds ought to be provided for helping people understand the new protection that's available for listed plants under the act.

In the research area, those funds ought not to be cut, particularly for predators such as wolves. We continue to need that. And additional funds should be provided for international work, including consultation considering the effects of our agency actions on the native wildlife overseas.

Both subcommittees and the Foreign Operations Subcommittee have expressed concern about that, that the program go forward.

The States should get their full amount authorized; it was increased substantially. And under the African Elephant Conservation Act, Secretary of the Interior has authority to fund a considerable amount of work on behalf of that rapidly declining population. And we believe funds should be provided there as well.

We have specific but short requests for BLM, National Park Service, and Forest Service, but I think they're self-explanatory.

Thank you.

Senator **Heflin**. Thank you.

Mr. **Fitzgerald**. Thank you, sir.

Senator **Heflin**. Next, is Congressman Ray Kogovsek here? If you would come forward and introduce your group, we'd be delighted to hear from you.

STATEMENT OF LEONARD C. BURCH, CHAIRMAN, SOUTHERN UTE INDIAN TRIBE

ACCOMPANIED BY ERNEST HOUSE, SR., CHAIRMAN, UTE MOUNTAIN TRIBE

Mr. KOGOVSEK. Senator Heflin, let me indicate to you that Congressman Ben Nighthorse Campbell, who is my successor in Congress and now my Congressman, asked if I would be here to introduce Chairman Ernest House of the Ute Mountain Indian Tribe, and in my old district and Ben's present district, and Chairman Leonard Burch of the Southern Ute Tribe, to very briefly indicate to you what we see as a funding problem.

I had the honor, Senator, to serve with you in the 96th, 97th, and 98th Congresses and enjoy being back in Colorado with some of my former constituents.

We also have with us here Mr. Tom Ships, who is the attorney for the Southern Ute Tribe.

So, without further ado, if I could introduce to you Mr. Leonard Burch, the chairman of the Southern Ute Tribe, who will be followed by Mr. Ernest House, who is the chairman of the Ute Mountain Tribe.

Mr. Chairman.

Mr. BURCH. Thank you. Mr. Chairman, I've got a statement submitted for the record and I'll briefly summarize the context of the testimony for this honorable committee.

First of all, as chairman of the Southern Ute Tribe, southwest Colorado, I appreciate the time. I'm here on behalf of asking the committee's support for additional funds to supplement a historic settlement agreement that we made last year, and also the legislation that was passed by the Congress, entitled the Colorado Ute Indian Rights Settlement Act of 1988. And this involves the State of Colorado, New Mexico, Federal Government and non-Indian and Indian owners water use in southwest Colorado.

We know now and have known in the past the Federal Government has looked upon historic treaties with Indian tribes. The agreement and the act represent the life blood and economic development on our reservation.

We want to make history, not repeat history.

The Federal Government needs to live up to its maintenance to the Tribes under the historic agreement and the act that I'm referring to.

As our President mentioned in his inaugural address:

> Great nations like great men must keep their word. When America says something, America means it, whether it's a treaty or an agreement.

So, with that, Mr. Chairman, I request that additional appropriation to comply with this agreement that we signed. The act, the Federal Government promised to provide $49.5 million for economic development funds for the Southern Ute and Ute Mountain Indian Tribes.

The money was to be appropriated over 3 years, with $19.5 million appropriated in fiscal 1990. The administration has requested less than one-third of that amount for fiscal 1990. Only $5 million.

If the Federal Government does not live up to its commitment to the tribal development funds, our historic agreement will be defeated.

The State of Colorado has met its commitment to the tribes. The non-Indian water users in southwest Colorado have made their commitments to the tribe. We ask that the Federal Government meet its commitment to the tribe and to all people of southwest Colorado and northwestern New Mexico in order to make the agreement and the historic—a reality.

So, Mr. Chairman, that briefly states what I'm requesting.

Thank you.

Mr. **Kogovsek**. Senator, this is Chairman Ernest House of the Ute Mountain Tribe.

Mr. **House**. Mr. Chairman, members of the committee, I thank you for coming before you this afternoon. My name is Ernest House, Sr., chairman of the Ute Mountain Tribe. Over the past 5 years, we, the tribes, have devoted countless funds to negotiate the water rights settlement.

Congress finally ratified it in November 1988 as Public Law 100-585. The settlement legislation provided my Ute people with municipal, industrial, and irrigation water from the Dolores and the Animas-La Plata project.

The settlement legislation also provided its own fund to provide my tribe with the financial wherewithal to put this new water resource to reservation homelands.

This legislation settlement authorized an appropriation of $32 million in development funds to my tribe over 3 years, with the first year appropriation of $12 million.

I come before you to ask will the initial $12 million be appropriated as provided in fiscal year 1990?

The settlement will bring three things to my tribe. It will bring drinkable water, which we are trucking from the community of Cortez, CO, right now to the little community of Towaoc.

Two, the State of Colorado appropriated $6 million for domestic waterland projects, which is now on its way.

Another important need for the timely appropriation of our development fund is an ongoing development of 75,000 acres of irrigated land from the project.

As a tribal leader, I fully understand the challenges inherent in agricultural development, or chances of success. We are systematically developing the planning and management capability.

In a broader sense, we see bringing the water to our reservation as the key to our continued efforts to develop valuable business that will employ and sustain our people.

We ask your support by appropriating the initial year's commitment of $12 million in fiscal year 1990 so we can move forward with our careful development plan.

Thank you very much.

Mr. **Kogovsek**. Senator, that ends our presentation. Let me indicate that both Senator Wirth and Congressman Campbell asked if I could leave statements, and they request of you to have them submitted for the record, if that's possible.

Senator **Heflin**. All right.

Mr. **Kogovsek**. Basically, we're here, Senator, just to ask the Senate and the House—and we appreciate your tremendous problems that you have as far as the budget this year and so on, but as you heard very eloquently from both of these gentlemen, they're asking the Federal Government to live up to their commitment that was just signed a few months ago.

Senator **Heflin**. Thank you. Appreciate your testimony, and your written statements will be put in the file. Thank you.

Mr. **House**. Thank you.

Mr. **Burch**. Thank you.

Senator **Heflin**. Now we'll call the remaining witnesses up. We've got Mr. Dan Darden of Louisiana, Mr. David Lester, the executive director, Council on Energy Resource Tribes; Mr. Bill Frank, Jr., Ms. Clara Spotted Elk of the Cheyenne River Sioux Tribe of South Dakota; Jonathan Taylor, Principal Chief, Eastern Band of Cherokee Indians of North Carolina; Francis Mitchell, Governor of the Penobscot Indian Tribe, Maine; Larry Sanchez, Nisqually Tribe; Ms. Janine Windy Boy, American Indian Higher Education Consortium; Tom Miller, Hannaville Indian School; and Georgia George, Affiliated Tribes of Northwest Indians.

If you will all come up, we're going to have to do this in an expedited manner because I have only about 3 minutes before I have to leave for another meeting.

Now, I gather that each of you have prepared statements. So what we're going to have to do is we want to acknowledge each of you, and have each of you give your name and who you represent and take about 10 seconds to describe what it is your requesting of the subcommittee.

Then, your written testimony will be included in the subcommittee's files, where it will be available for all Senators and their staffs to review.

So, if you'll start, tell us your name and who you represent.

STATEMENT OF DAVID HARRISON, COUNCIL OF ENERGY RESOURCE TRIBES

Mr. **Harrison**. Thank you, Senator. I'm David Lester, appearing here for the Council of Energy Resource Tribes. And I'm grateful for the opportunity to put our statement in the record, and I look forward to working with this committee to put the appropriation together.

Senator **Heflin**. Thank you.

STATEMENT OF JOHNATHAN TAYLOR, CHIEF OF THE EASTERN CHEROKEES, CHEROKEE, NC.

Mr. **Taylor**. Mr. Chairman, it's a pleasure for me to testify before this committee today. I'm Jonathan Taylor. I'm Chief of the Eastern Cherokees from Cherokee, NC. I do have a prepared statement which I already presented to the clerk, 10 copies. And I would like the Chair to put this into the record. And we're talking about some things that Senator Byrd is really interested in, is education and lack of funds to provide that education.

Thank you, Mr. Chairman, for letting me come.

Senator **Heflin**. Thank you, sir.

STATEMENT OF DAN DODD, LOUISIANA CHITIMACHA TRIBE

Mr. **Dodd**. Mr. Chairman, I'm Dan Dodd from Louisiana Chitimacha Tribe. I have written statements. I've already submitted it and I appreciate you having me here, even though it was just for a few seconds.

Senator **Heflin**. Thank you. We're delighted to see you.

STATEMENT OF CLARA SPOTTED ELK, CHEYENNE RIVER SIOUX TRIBE, SOUTH DAKOTA

Ms. **Spotted Elk**. Mr. Chairman, my name is Clara Spotted Elk and I'm here on behalf of Mr. Wayne Ducheneaux, the chairman of the Cheyenne River Sioux Tribe in South Dakota.

Mr. Duccheneaux and—will follow up with members of the South Dakota delegation and the committee.

Thank you.

STATEMENT OF BILL FRANK, CHAIRMAN OF THE NORTHWEST INDIAN FISH COMMISSION OF THE NORTHWEST

Mr. **Frank**. Mr. Chairman, I'm Bill Frank, chairman of the Northwest Indian Fish Commission from the great Northwest, and where salmon tribes are out there in Northwest. And we also love catfish. [Laughter.]

Senator **Heflin**. Eat more of it. [Laughter.]

Mr. **Frank**. Right.

Senator **Heflin**. And eat more salmon. I like salmon, too.

Mr. **Frank**. And we want to thank you for the opportunity of testifying today.

STATEMENT OF GEORGIA GEORGE, SECRETARY, AFFILIATED TRIBES OF NORTHWEST INDIANS

Ms. **George**. Good afternoon, Mr. Chairman. My name is Georgia George. I'm the secretary of the Affiliated Tribes of Northwest Indians, representing approximately 45 tribes in the Northwest States.

I'm also chairwoman of the Suquamish Tribe, the descendants of Chief Self of the Great City of Seattle. And I appreciate the opportunity to be in front of you this afternoon.

I've submitted my written testimony, and I thank you for your time.

STATEMENT OF LARRY SANCHEZ, NISQUALLY INDIAN TRIBE

Mr. **Sanchez**. Mr. Chairman, my name is Larry Sanchez, former chairman of the Nisqually Indian Tribe; also from the Great Pacific Northwest.

I have submitted written testimony to the clerk here. I am glad to be allowed to come and speak on behalf of my people. My only regret is that written testimony will not allow you to see how I feel about the examples that we have presented to you.

Thank you.

Senator **Heflin**. Well, we appreciate you all. If any of you would like to extend your written remarks and add anything to it, you can do so if you get it in in the next 2 weeks. And if there are other groups that are here that do not have prepared testimony, if you will get it in in the next 2 weeks, we'd be delighted to do it.

We in Alabama don't have too many Indian Tribes, but we've got a Porch Band of the Creek Indians, and I'm sure most of you all know my friend, Eddie Tulles. And he's a great fellow.

So I'm delighted to see it.

All right, next is Butch St. Germaine.

STATEMENT OF BUTCH ST. GERMAINE, VICE CHAIRMAN, LAC DU FLAMBEAU BAND OF LAKE CHIPPEWA INDIANS

Mr. **St. Germaine**. My name is Butch St. Germaine. I'm vice chairman of the Lac du Flambeau Band of Lake Chippewa Indians. We have submitted written testimony and we appreciate your time.

Senator **Heflin**. Thank you.

STATEMENT OF DEWEY SCHWALENBERG, EXECUTIVE DIRECTOR, NATIVE AMERICAN FISH AND WILDLIFE SOCIETY

Mr. **Schwalenberg**. I'm Dewey Schwalenberg. I'm the executive director of the Native American Fish and Wildlife Society. And we have also submitted written testimony, and we would like to amend that by including some additional testimony submitted within the next week or so.

We thank you for your opportunity to testify.

SUBCOMMITTEE RECESS

Senator **Heflin**. Thank you. Thank you. Thank you.

All right, the subcommittee will now stand in recess until 10 a.m., Wednesday, February 15, when we will hear testimony from the Energy Conservation Programs of the U.S. Department of Energy.

This hearing is recessed.

[Whereupon, at 2 p.m., Thursday, February 9, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, February 15.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

MONDAY, FEBRUARY 27, 1989

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m. in room S–128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd, Bumpers, McClure, and Domenici.

DEPARTMENT OF ENERGY

OFFICE OF THE ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY

STATEMENT OF DR. JOHN R. BERG, ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY

ACCOMPANIED BY:

ALAN STREB, DEPUTY ASSISTANT SECRETARY FOR CONSERVATION

FRANK STEWART, DIRECTOR OF STATE AND LOCAL ASSISTANCE PROGRAMS

BUDGET REQUEST

Chairman BYRD. The subcommittee will come to order. This is the time to review the fiscal year 1990 budget request for the energy conservation programs of the U.S. Department of Energy, the Smithsonian Institution, and the National Gallery of Art.

We will begin first with the energy conservation budget. Testifying in support of that request will be Dr. John R. Berg, Assistant Secretary for Conservation and Renewable Energy.

The request is $95,528,000 for the energy conservation programs, and it represents a decrease of nearly $220 million from the appropriation for the current year, which was $315,284,000.

The request represents a 70-percent reduction from the fiscal year 1989 appropriation. Of the reduction which I have just noted, namely, $220 million, some $204 million has been cut from the State and local program grants, such as low-income weatherization.

These grant programs have been reduced by 96 percent compared to the current level. Energy conservation research and development programs as well have been reduced by 47 percent. No funds have been added to the energy conservation programs by the

President's budget amendments which were announced on February 9.

PREPARED STATEMENT

Dr. Berg, we have your prepared statement and we'll include it in the record in its entirety.

If you would please introduce your associates here and summarize your prepared remarks if you wish, we will then move on to the questions.

[The statement follows:]

STATEMENT OF DR. JOHN R. BERG

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss the fiscal year 1990 Congressional budget request concerning the Department's Conservation Research and Development and State and Local Assistance programs. The total request for this appropriation is $95.5 million. The budget for these programs is consistent with the goals and objectives of national energy policy and is fully responsive to the Administration and Congressional goals of deficit reduction.

I would now like to discuss each of our major program areas and its related fiscal year 1990 funding request.

BUDGET REQUEST FOR ENERGY CONSERVATION R&D

The fiscal year 1990 budget request for energy conservation research and development totals $87.9 million. It includes $15.6 million for Buildings and Community Systems, $16.1 million for Industrial Programs, $29.7 million for Transportation and $24.1 million for Multi-Sector programs and $2.4 million for Policy and Management.

BUILDINGS AND COMMUNITY SYSTEMS

We are requesting $15.6 million for Buildings and Community Systems (BCS) research, technology transfer, and regulatory activities in fiscal year 1990. The funds requested include $7.8 million for research and development projects, $1 million for technology assessment and transfer, $3.6 million for legislatively mandated regulatory programs, $2.5 million for program direction, and $0.7 million for capital equipment. The R&D activities focus on selected high-risk and high-payoff projects, which are not likely to be pursued by the private sector alone. Many are carried out by private companies and institutions operating under cost-shared contracts or cooperative agreements with the Department. Our activities complement industry efforts and do not displace them.

Despite impressive gains in energy efficiency during the past 15 years, the buildings sector still uses almost 28 quads of energy annually. This is 36 percent of our total national consumption, more than either the transportation or industrial sector. This energy use is forecasted to increase to 40 quads by 2010. This estimate was provided by the Energy Information Administration and is based on energy supplier data. In residential buildings, space heating, water heating, and refrigeration use the largest amounts of energy; in commercial buildings, space heating, lighting, and air conditioning use the largest amounts. It is estimated that a 30-percent reduction from present levels of energy use could be achieved by building envelope improvements that reduce heating, ventilating, air-conditioning, and lighting loads and that significant additional savings could be achieved by improving the efficiency of equipment used to perform these and related building functions. Our target is to help to hold building energy use in 2010 to 28 quads—a savings of 12 quads from presently forecasted levels. The Buildings and Community Systems program conducts research to advance the technologies that can produce these savings and makes the results of that research available to the private sector. This program also implements building energy regulatory activities mandated by Congress.

The research and development funds are for three subprograms: Building Systems, Community Systems, and Technology and Consumer Products. We are requesting $3.5 million for the Building Systems subprogram to continue research on the building-envelope including materials, fenestration, roofs, walls, and foundations; indoor air quality, infiltration, and ventilation; advanced commercial building subsystems interactions; building performance simulation; and energy retrofit of existing buildings.

Our building materials research will continue development of vapor and air barriers and thermal performance testing. Our fenestration research includes development, in cooperation with Canada and ASHRAE, of procedures for evaluating the complex windows that industry is beginning to produce.

Our roof research focuses on improving the energy performance and durability of roofs. In fiscal year 1990, we will continue to operate the Roof Research Center as a DOE user facility with industry participation. Research areas will include study of membrane aging and moisture effects. We will complete our projects for testing light weight concrete, sprayed foam, and ceramic paint products. We will complete the guidebook on low slope roofs and publish guidelines on using roof mass to improve thermal performance.

In the area of walls and foundations research, we will complete some important new design tools which pull together the results of research at DOE and other organizations. These include a builder's version of the Building Foundations Design Handbook and a handbook on mitigation of moisture problems in energy efficient houses.

In fiscal year 1990, we will develop a protocol for indoor air quality measurement and diagnosis, will continue to evaluate energy efficient ventilation technologies, and will continue participation in collaborative efforts to secure voluntary participation in industry consensus standards for indoor air quality, infiltration, and ventilation.

In the area of building subsystems interactions, we will produce and test a computer program for building designs and will continue to maintain and update the DOE-2 building energy performance simulation.

In the existing buildings activity we will monitor projects selected in the fiscal year 1989 solicitation of retrofit technologies for single family, multifamily, and commercial buildings, and analyze the results.

We are requesting $0.5 million for the Community Systems subprogram. These funds will be used to conduct laboratory testing of the additives to reduce the friction of fluids used in district cooling and to initiate full scale testing of promising additives.

We are requesting $3.8 million for the Technology and Consumer Products subprogram in fiscal year 1990. The purpose of this research is to provide technologies that could lead to more efficient building energy conversion processes and equipment. The greatest promise for significant energy savings in building equipment is in heating, cooling, and lighting—areas that account for 60 percent of the energy used in buildings. Our work on improved efficiency in those areas focuses on thermally activated heat pumps, advanced refrigeration, and advanced lighting.

In thermally activated heat pumps, we will complete laboratory testing and evaluation of a prototype residential-size absorption heat pump and will design, fabricate, and test critical components for an engineering unit for field testing. We will also continue development of key components for an internal combustion engine-driven heat pump and for a magnetically coupled free piston Stirling engine-driven compressor.

In the area of combustion systems, we will continue research on new oil atomization processes to achieve more complete combustion, reduce emissions, and enhance heat transfer.

In advanced refrigeration systems, we will continue laboratory breadboard testing of refrigerant mixtures in advanced cycle configurations. We will also continue research to determine engineering properties of novel refrigerant mixtures.

In lighting equipment research, we will continue to investigate surface wave lamp phenomena, and inductive driving techniques for electrodeless high intensity discharge (HID) lamps. We will complete our long term tests of isotopically enriched mercury lamps.

The goal of the Technology Assessment and Transfer subprogram is to provide the analytic tools and information needed for program planning and to ensure that research results and information on conservation in buildings are transferred to potential users. We are requesting $1 million for this subprogram. This funding will continue support for centralized BC technology transfer activities, for technology assessments and program planning, for studies of building conservation technologies in other developed countries and for assessments of their impact on U.S. trade and technology leadership.

We are requesting funding for two Congressionally mandated regulatory program activities: Energy Conservation Standards and Guidelines for New Buildings, and Appliance Standards.

We are requesting $0.8 million for the development of Energy Conservation Standards and Guidelines for New Buildings in fiscal year 1990. We will report to Congress on the results of the demonstration of interim standards for Federal residential buildings and initiate development of the final rule. We will be conducting the demonstration of the interim standards for private sector residential buildings, and will complete the demonstration and assess the impact of the interim commercial buildings standards on the building industry.

For Appliance Standards, we are requesting $1.8 million to continue research and analysis on the impacts of standards, to publish a final rule for dishwashers, clothes washers and clothes dryers, and to publish proposed rules for room air conditioners, mobile home furnaces, water heaters, kitchen ranges and ovens, pool heaters, direct heating equipment, and fluorescent lamp ballasts. In addition, we will continue research to develop, maintain, simplify and improve appliance test procedures in support of the FTC labeling program, and to process manufacturers' requests for waivers of test procedures.

We are requesting $1 million to continue implementation of the Federal Energy Management Program in fiscal year 1990. The Federal Energy Management Program is a coordinated effort to reduce energy use by Federal agencies and transfer energy management technologies and techniques among the agencies. These funds are needed to collect and analyze Federal energy data and report the results to the President and Congress; provide technical support and assistance to agencies in the use of energy; continue the Federal Energy Efficiency Awards program; and implement and evaluate shared savings and other third-party financing efforts used to promote energy efficiency in Federal agencies.

We are requesting $0.7 million to provide capital equipment needed to support those Buildings and Community Systems research efforts conducted by the national laboratories and universities. In addition, we are requesting $2.5 million for Program Direction. This funding will provide salaries, benefits, travel and support of 45 FTE's to manage the Buildings and Community Systems program.

MULTISECTOR

We are requesting $24.1 million for the Multi-Sector Programs which include the Energy Conversion and Utilization Technologies (ECUT) Program, Conservation Program International Research Monitoring (IRM), Conservation Program Analysis and Planning (CPAP), the Inventions and Innovation Program, and the National Appropriate Technology Assistance Service (NATAS). It includes $17.8 million for ECUT, $0.25 million for IRM, $0.30 million for CPAP, $3.85 million for the Inventions and Innovation Program, and $0.5 million for NATAS. The budget request also includes $0.1 million in capital equipment, $0.544 million in program direction to support FTE's for Multi-Sector programs, and $0.759 million for Technology Assessment and Transfer.

ECUT Program research activities are interdisciplinary in nature. ECUT seeks to capitalize on basic research breakthroughs to address "real world" problems which cut across more than one energy consuming sector. ECUT research results in improved understanding of materials problems and also provides predictive models and design tools useful to the private sector for achieving greater energy productivity. The ECUT interdisciplinary technical areas are: Combustion, Thermal Sciences, Materials, Biocatalysis and Tribology.

In fiscal year 1990, $3.8 million is requested for the ECUT Combustion Program. ECUT Combustion research provides analytical and measurement techniques needed to understand the thermochemical and related processes that take place in the combustion of fuels and in the conversion of the released thermal energy to work. The results of this research are being used by the U.S. auto industry and others in the private sector to develop more efficient, reliable, and clean combustion systems and devices. This activity is especially significant since the reduction in the use of fossil fuels by more efficient combustion systems would lead to reduced emission of carbon dioxide and nitrogen oxides.

The $1.6 million requested for the ECUT Thermal Sciences Program will be used to develop improved thermodynamic and fluid dynamic analytical capatilities and experimentally validated computerized data bases. These are needed to improve the efficiencies of a wide variety of energy conversion processes and provide an improved heat and mass transfer technology that will optimize utilization of the thermal energy released by combustion of fuels. Application of this research to cooling and refrigeration systems will contribute to the U.S. response to the international concern on chlorofluorocarbons (CFC's) which are of concern both as so-called "greenhouse gases" and as a threat to the stratospheric ozone layer. Alternative refrigeration and space conditioning technologies that do not use CFC's will be investigated and property characteristics of alternative working fluids to replace CFC's in conventional technologies will be undertaken.

The $7 million requested for the ECUT Materials Program will be used to continue to investigate energy conversion applications of the new high critical-temperature superconducting materials. In addition, research will continue to develop high-temperature structural materials (new and different ordered metallic alloys and ceramics); to pursue research on recycling polymers (lightweight materials); to initiate exploration of high temperature corrosion-resistant materials and to develop computer models which will allow for the design of ductile ordered alloys prior to development in the laboratory. In the last regard, we are encouraged by results which appear to explain why the addition of a small amount of the element boron to the ordered intermetallic alloy nickel aluminide renders ductile this formerly highly brittle material. More importantly, this insight has the potential to permit us to extend this knowledge to design ductility into new ordered alloys prior to their ever being made in the laboratory. This capability to design desired properties into alloys could have major implications for the international competitiveness of an important segment of the U.S. metallurgical industry.

The $2.7 million requested for the ECUT Biocatalysis Program will be used to establish a technological data base for high productivity bioreactors needed by private industry in order to manufacture industrial chemicals using biological systems which are economically and energetically competitive with conventional processes. In addition chemical and biological processes will be investigated to identify those that could be used as possible means of removing carbon dioxide and producing oxygen or oxygenated organic chemicals in the process.

The $2.7 million requested for the ECUT Tribology Program will be used for research on high-temperature lubricants, development of in-situ friction and wear diagnostic instrumentation, and for engineering tribological surfaces. While research activities in tribological design tools will be closed-out in fiscal year 1990, new investigations will begin in tribological systems engineering.

The fiscal year 1990 budget request of $0.25 million for the Conservation Program International Research Monitoring will be used to continue to monitor and evaluate the status of foreign technologies related to energy conservation and to compare it with the status of U.S. technologies.

The $0.3 million request for Conservation Program Analysis and Planning will support the development of the Conservation-wide multi-year program plan, as well as associated analyses and assessments which address appropriate issues for a consistent planning framework.

The request of $0.1 million for capital equipment will be used to procure small pieces of instrumentation for the ECUT program.

The fiscal year 1990 budget requests $3.85 million for the Inventions and Innovation Programs. The Energy-Related Inventions Program was established by Congress to evaluate the technical merits of energy-related inventions submitted to DOE and to provide technical assistance and grants to further develop promising inventions. The National Institute of Standards and Technology (NIST), formerly the National Bureau of Standards, conducts evaluations through its Office of Energy-Related Inventions. Promising inventions identified by NIST are directed to DOE, which may elect to provide Federal assistance when private sector support is not available. From program inception in 1974 through 1988, approximately 25,000 disclosed inventions have been reviewed and evaluated by NIST. Based on NIST recommendations, 300 inventors have been awarded grants totaling $22 million. Of these, at least 73 inventions have entered the marketplace, generating estimated cumulative sales of $350 million and directly creating more than 1,000 jobs. In fiscal year 1990, the requested funding will support approximately 29 of the most promising inventions. During fiscal year 1990, DOE will continue to work one-on-one with inventors to provide commercialization planning assistance and will conduct 3 workshops for recommended inventors to assist them in dealing with the various aspects of bringing these technologies to the marketplace.

In fiscal year 1990, the Inventions Program will continue to identify and evaluate the activities of existing local, State, and regional programs which are working directly with inventors, and determine the extent and success of efforts being conducted by the private and non-Federal public sector to foster technological innovation. In addition, the effort will establish procedures with States and local areas that have innovation support programs to permit the exchange of information and provide for shared support of selected innovative organizations and programs. This Program also supports the Patent and Trademark Office Project XL with technical assistance and information exchange. The goal of this support is to assist Project XL in identifying how to encourage and motivate school children to be inventive. These activities are funded as part of the Technology Assessment and Transfer budget element.

Over the past 7 years the Innovative Concepts Program has provided seed money to conduct preliminary energy and economic assessments of innovative approaches to saving energy in the areas of building materials, industrial processes, industrial separations, and building retrofit. Awards of approximately $15,000 were made to each of 42 researchers selected from responses to RFP's on these targeted topics. A new cycle on innovative techniques for recycling plastics without harming the environment will commence in fiscal year 1990. The Innovative Concepts Program will continue to conduct limited tracking of these researchers in order to determine how many received follow-on funding, how many new businesses were started, how many patents were issued as a result of funding by this program, and whether the approach that we developed is being used as a model at national laboratories to encourage innovation and creative solutions to energy conservation problems.

In 1983, the Congress appropriated funds to establish the National Appropriate Technology Assistance Service, the third Multi-Sector program, to disseminate information on conservation and renewable energy technologies and to give advice and guidance in using them effectively. NATAS was formally established in fiscal year 1984, and to date has received over 36,000 requests for information and assistance. The fiscal year 1990 budget request contains $0.5 million for NATAS for continuation of information and technical assistance to individuals and energy-related businesses. (The current rate of inquiries is about 165 per week and the $0.5 million request will provide for continued responsiveness to public inquiries.)

The fiscal year 1990 budget request for Technology Assessment and Transfer activities of $0.759 million for the ECUT and Inventions programs will be used to provide technical and analytical support for management of the ECUT and Inventions programs, to conduct the monitoring of inventors assisted by the Energy-Related Inventions Program, and also to support the Inventions program activities with inventor organizations earlier described.

We are requesting $0.544 million for Program Direction. This funding will provide salaries, benefits, and travel for a staff of 10 FTE's to manage the Multi-Sector program.

INDUSTRIAL PROGRAMS

The fiscal year 1990 budget request for the Office of Industrial Programs (IP) is $16.13 million. These funds will be used to carry out research and development activities in four subprogram areas: Waste Energy Reduction, Industrial Process Efficiency, Industrial Cogeneration, and Implementation and Deployment. The goal of these activities is to encourage improved energy efficiency in industry, which accounts for approximately 36 percent of total U.S. energy consumption, and to provide technologies which offer industry a choice of fuel options. The Department's activities in the industrial area consist of a comprehensive program of carefully targeted technological research and development, combined with the transfer of technology results to the industrial sector for implementation of the research. The R&D activities focus on selected high risk ventures which are not likely to be pursued by the private sector alone. Most of the R&D is carried out by private companies and institutions operating under cost-shared contracts or cooperative agreements with the Department of Energy.

In fiscal year 1990, $6.4 million is requested for the Waste Energy Reduction subprogram, which supports research and development on improved combustion efficiency for industrial furnaces, boilers and process heaters through oxygen enrichment technologies, improved burner designs, and sophisticated combustion controls. The subprogram also supports R&D on waste heat recovery by development of advanced industrial heat pumps, high temperature recuperators, and new ceramic materials for heat exchangers; as well as research into industrial waste materials recovery and utilization. An example of research in this subprogram is the development of a pure low cost silicon carbide powder for making heat exchanger components to reduce the cost and improve the reliability of high temperature recuperators. An offshoot of this work was the development of non-destructive evaluation techniques to determine the integrity of fabricated ceramic parts for use in high temperature service. A private company which worked with Idaho National Engineering Laboratory under a DOE contract now offers this Inspection service to ceramic part fabricators.

In addition to ceramic material development, particularly with reinforced fiber materials, efforts will be continued on advanced concepts for heat exchangers, new types of chemical heat pumps for industrial process applications, and the advancement of technologies to utilize wastes through the use of chemical and biotechnology processes.

In fiscal year 1990, $5.3 million is requested for the Industrial Process Efficiency subprogram which includes R&D for advanced sensors and control systems; advanced separation systems; and development and testing of electrode materials for production of aluminum in electrolytic cells. Significant progress is being made in several of these areas, and continuation is planned for fiscal year 1990. The development of stable anodes and cathodes for aluminum production offers great promise in reducing the electrical power requirements for the process. Laboratory work will be conducted in preparation for scaling up to a 20,000 ampere test cell. If successful, the process will be further scaled up to a full-size aluminum production cell in the future. In fiscal year 1990, R&D will also be continued on advanced, on-line, industrial sensors for improved control of a multitude of industrial processes; advanced low energy separation processes using techniques such as membranes, continuous liquid chromatography, impulse drying of wet web materials such as paper, and freeze concentration. All of these efforts offer excellent opportunities to reduce the energy consumption in basic industrial processes.

A minimum of funds is being requested for the Metals Initiative in the fiscal year 1990 budget request since newly-funded projects are just now getting underway. A project for the development of superplastic steel has been funded with Lawrence Livermore National Laboratory and includes sharing of costs by three industrial companies. This project offers the possibility of producing net-shape components with large monetary savings, since machining, joining, and special heat treating procedures could be eliminated. A second project is being negotiated with the American Iron and Steel Institute which involves direct reduction of iron ore.

In fiscal year 1990 $1.63 million is requested for the Industrial Cogeneration subprogram, which focuses on research for cogeneration technologies, such as topping cycles, and the direct conversion of thermal to electrical energy which can either be part of a topping or a bottoming cycle. This program has been very successful in promoting cogeneration technologies which utilize alternative fuels. For example the development of a coal-water slurry fired slow speed diesel was successfully completed under this program. The program overcame the difficulties of fuel handling and injection and obtained sustained running of the test engine with very low emissions. IP research is continuing on the indirect-fired Brayton system, the high temperature steam turbine system and the alkali (sodium) heat engine, which utilize alternative fuels for cogeneration. In fiscal year 1990, $1.63 million is requested to continue the topping cycle and sodium heat engine research.

In fiscal year 1990, $1.1 million is requested for the Implementation and Deployment subprogram. In addition to its research and development efforts, the transfer of technology to industry remains a principal objective of DOE's industrial conservation program. Examples of recent technology transfer efforts include conferences on membrane technology and industrial waste waters as well as preparation of technology transfer documents on R&D in materials development and waste products utilization technology. Economics provide the most important incentive that industries have for adopting more energy-efficient technologies. Thus, the technology transfer effort is designed to focus attention on the economic benefits associated with specific technologies. Industry participation in the technology development process is critical to successful commercialization, and trade associations are typically involved in the technology transfer effort, helping to multiply the effects of the Department's own activities. In fiscal year 1990 work will focus on workshops, conferences, and technical symposia and the development of written materials focusing on technologies developed with DOE assistance. This budget category now includes funding for technical evaluation, analysis and planning support for the total program. This was formerly included in the Waste Energy Reduction Subprogram.

We are requesting $1.7 million for Program Direction. The funding will provide salaries, benefits and travel for a staff of 26 FTE's to manage the Industrial Programs.

TRANSPORTATION

The fiscal year 1990 budget request for the Transportation program is $29.7 million. This will continue R&D in five major program areas: Vehicle Propulsion; Alternative Fuels Utilization; Electric and Hybrid Vehicles; Advanced Materials Development; and Technology Assessment and Transfer. The overall objective of these programs is to support long-term, high-risk, but potentially high-payoff R&D on promising transportation energy conservation technologies that are unlikely to be undertaken by the private sector alone. The transportation sector used 21.2 quads of energy in 1987, 97 percent of which was in the form of oil. Transportation petroleum consumption was approximately 10 million barrels per day, which accounted for 63 percent of all petroleum consumed and 27 percent of all energy used in the United States.

The goal of the transportation conservation program is to improve energy efficiency and to enhance the flexibility of fuel use options in transportation related technologies. This goal is underscored by the fact that such technologies have potentially significant leverage on the U.S. and world oil situation. Reductions in U.S. transportation oil use can enhance energy security, reduce oil imports and related trade payments to foreign countries, and enhance economic growth. In addition, the technologies under development will provide options that will be beneficial in the reduction of urban air pollution. These programs provide the technology base necessary to support private sector efforts to develop technologies which are either more efficient or serve as alternatives to those based exclusively on petroleum.

In fiscal year 1990, $7.2 million is requested for the Vehicle Propulsion R&D program which supports research and development of high efficiency and advanced heat engine technologies. This area includes R&D on advanced engine concepts including the automotive gas turbine and the heavy duty adiabatic (low heat rejection) diesel engines. The objectives for both engines are to achieve at least a 30-percent improvement in fuel efficiency over conventional current production heat engines, meet or exceed established requirements for regulated emission levels, and operate satisfactorily on a wide variety of fuels. Funds will be used to develop and evaluate high temperature structural ceramic components for automotive gas turbine engines; and to conduct research on thermal insulation, lubrication, advanced thermomechanical systems, and high temperature combustion and emissions for adiabatic diesel engines.

In fiscal year 1990, $1.3 million is requested for the Alternative Fuels Utilization program which fosters the use of nonpetroleum-based transportation fuels by establishing a technology data base for utilization of synthetic, alcohol and gaseous fuels in both contemporary and advanced heat engines. These funds will be used to investigate performance, emissions, and wear with advanced and conventional engines using alternative fuels; operate a synthetic fuels test facility; and collect and analyze methanol fuel use data from the ongoing Federal fleet evaluation project. An additional $1.4 million has been requested to start Implementing the provisions of the Alternative Motor Fuels Act of 1988, which was enacted in October 1988.

In fiscal year 1990, $4.9 million is requested for the Electric and Hybrid Vehicle program which addresses the need for improved range, reliability, cost, and performance of electric and hybrid vehicles, giving priority to development of technologies to a level suitable for private sector decisions to produce specific-purpose vehicles. These funds will be used to continue the development of sodium-sulfur, zinc-bromine, and lithium-metal sulfide batteries to prove the capability of full battery subsystems to function properly in a vehicle including typical environmental, shock, and vibration conditions, and realistic electric vehicle driving profiles. Funds will also be used to conduct laboratory characterization testing of advanced battery systems and to initiate in-use test and evaluations of new vehicle technologies.

In fiscal year 1990, $10.3 million is requested for the Advanced Materials Development program. This area addresses the need to develop an industrial technology base in structural ceramics, ceramic composites, and coatings capable of providing reliable and cost-effective components for high temperature, efficient transportation propulsion systems while eliminating requirements for scarce strategic materials. The funds will be used to continue research projects in ceramics powder development, joining of ceramics, chemical vapor deposition coatings, toughened ceramics, ceramic composite processing, new ceramics forming and sintering techniques, and ceramic whiskers development. R&D projects in design methodology and database and life prediction will also be continued. These include advanced statistics and wear behavior of materials for insulated diesel engines, ceramic fracture behavior, cyclic fatigue failure, high temperature tensile testing, toughened ceramic life prediction and ceramic powders characterization. To support the advanced materials work conducted under this and other research programs, a total of $2 million is requested to support the scientific staff and building maintenance and operations for the user oriented High Temperature Materials Laboratory at the Oak Ridge National Laboratory.

In fiscal year 1990, $1 million is requested for Technology Assessment and Transfer. This program centralizes cross-cutting functions such as the identification, monitoring, review, and assessment of related industry and market trends; transfer of information on technologies developed; publication of statistical compendiums; and management and planning support. The funds will be used to collect, analyze and present transportation and energy data including market conditions for fuel efficient technologies; provide consistent baseline projections of the demand for transportation energy by mode for use by program managers in program planning and monitoring; and conduct transportation technology assessment and transfer activities.

No funds are being requested for the publication and distribution of the Gas Mileage Guide. DOE will encourage the private sector (automotive publications and newspapers) to print the fuel economy Information when it is released each new model year by the Environmental Protection Agency.

We are requesting $1.5 million for Program Direction. This funding will provide salaries, benefits, and travel for a staff of 26 FTE's to manage the Transportation programs.

STATE AND LOCAL ASSISTANCE PROGRAMS

Program direction funds of $7.6 million are requested for the Office of State and Local Assistance Programs (OSLAP) to provide for program management of prior year Federal grants and monitoring and oversight of Exxon and Stripper Well overcharge funds distributed to the States. Our request will cover salaries and expenses for 95 FTE's at Department of Energy headquarters and field offices. Program direction funds will be used for contractor support for analysis, evaluation, and technical assistance.

As the result of court decisions in the Exxon, Stripper Well, and other oil overcharge cases, the States have received $3.6 billion for use mainly in five Federal energy grant programs—the four State and Local Assistance Programs in the Department of Energy and the Low-Income Home Energy Assistance Program in the Department of Health and Human Services. This large disbursement was a substantial increase over annual appropriated fund levels and as of December 31, 1988, the States have allocated about 84 percent of their total receipts. Future overcharge recoveries to be returned to the States are estimated to be $600 to $750 million. No DOE grant funds are requested in the fiscal year 1990 budget. These programs are not being terminated; they are being supported by non-appropriated funds.

Our goal has been to enable State and local governments to develop more non-Federal funding for their energy programs. To that end, our efforts have focused increasingly on identifying and establishing private sector sources of funds and on developing mutually beneficial working relationships between States and other groups that will help them continue and expand their most successful and highest priority activities. In recent years, energy partnerships have been developed, and opportunities for shared savings and income-generating projects have been demonstrated and put into practice. There has been a concerted effort to remove institutional barriers to increased energy efficiency and to encourage and facilitate use of advanced conservation technologies.

CONCLUSIONS

The programs presented for your review today show enormous potential for the future. Collectively, their potential applications are expected to ultimately make them highly attractive candidates for private sector development and deployment. These technologies promise increasing competition within the energy marketplace.

The programs represent a solid commitment to the continuing development of these technologies. We are confident that our proposals will increase understanding of the potential for virtually all of the most promising conservation technologies and will substantially contribute to the base of technical information required for informed decision making by industry and consumers. This is a budget which believe seriously recognizes today's fiscal responsibilities, as well as tomorrow's anticipated needs.

Thank you for the opportunity to present our budget request.

INTRODUCTION OF ASSOCIATES

Dr. **Berg**. Thank you very much, Mr. Chairman. I appreciate the opportunity to appear before you.

I will summarize my statement orally. I have with me Mr. Alan Streb, Deputy Assistant Secretary for Conservation; and to your left and my right, Mr. Frank Stewart, Director of State and Local Assistance Programs.

We appreciate this opportunity to appear before you today to provide you information on the fiscal year 1990 budget request for the Department's Conservation Research and Development and State and Local Assistance Program.

The budget for these programs is consistent with and supports the goals of the national energy policy and is fully responsive to the administration and congressional goals of deficit reduction.

We have requested $87.9 million for energy conservation research and development. This budget was developed based on a multiyear program financing for each conservation and technology program.

We set goals for each program and then carefully develop a strategy to accomplish them. Industry is consulted to determine the needs and priorities.

In general, the goals for the conservation program contribute to the technical and economic environment necessary to support the development of energy conservation technology.

To accomplish this, a multiyear plan provides prioritization of our research needs. We've requested $7.6 million for the Office of State and Local Assistance Programs, to provide for program management, and appropriate funds for the State grants, and also for monitoring of the States' use of oil overcharge funds.

Admittedly, the budget request to implement these plans is not generous, but it is sufficient and it is within current Federal budget limitations. We concentrate our efforts on the highest priority research to address these crucial and critical scientific and technological issues.

We believe this will provide an effective program that will accomplish our program goals. We also continue to focus on improved planning and on dissemination of the results of our research and development programs and our expanded collaboration with the private sector in the forms of cost sharing and technology transfer.

The research sponsored by the Federal Government and private companies is now bearing fruit in better materials, improved components, and system designs which will increase energy use efficiency and make alternative fuel use both reliable and economically attractive.

ACCOMPLISHMENTS

I'd like to mention a few of the major accomplishments achieved during 1988. In our multisector program in combustion research, we have developed a nonintrusive spark plug which can be put into a production engine while it is running, and through fiber-optics it is possible to actually see what is taking place during the ignition process in the chamber of the engine.

This particular device is being looked at and is extremely important to the big three U.S. automakers, who have expressed interest in using this device. It is being trade-marked as the Barrack-Witze spark plug and marketed by Barrack Technology Corp. of Massachusetts.

In our Energy-Related Inventions Program, we continue to supply funds for small inventors. One of these inventors developed a new design for precision bearings, a potential breakthrough that could have wide-ranging applications from submersible pumps to computer parts. The bearing could be produced domestically at a fraction of the cost of the current imported bearings.

In our Industrial Program, in a joint project with the Solar Energy Research Institute, we have successfully run a continuous extraction system to obtain a phenolic rich oil extraction from bark and sawdust wood waste, useful as an adhesive precursor.

Adhesives from wood wastes thus could displace the present use of adhesives derived from petroleum used in the plywood industry. These resins are being tested by Weyerhaeuser, Boise-Cascade, Georgia-Pacific and other interested end-users, as well as producers of resin adhesives.

Our Industrial Program is also working out how, on a cost-shared basis, we can develop a membrane system that provides alternatives to existing energy-intensive distillation processes in petrochemical streams. The cost-shared field test at an Exxon facility has continuously and successfully separated hydrogen sulfide and carbon dioxide from natural gas.

In our Buildings and Communities Systems Program, the Department of Energy has granted a patent waiver to Martin Marietta Energy Systems on a dual-loop, triple effect absorption chiller cycle conceived at Oak Ridge National Laboratory. This next generation cycle represents a 50-percent improvement in the cooling generation performance over state-of-the-art absorption chiller technology. The Trane Co. has been awarded a license and the Gas Research Institute has agreed to cosponsor further development with the Trane Co.

In our Transportation Program, the first phase of the design and procurement of improved ceramic components for the automotive gas turbine has been completed through collaborative efforts with the ceramic industry. These components were developed on the operation of small gas turbine engines at temperatures in excess of 2,500 °F., thereby providing potential energy efficiency improvements of more than 30 percent over today's technology.

I'd like to show you a ceramic ball that's being made by Norton. We also have with us an example of a ball-bearing ring that is being produced by Norton.

These materials are lighter-weight, withstand higher temperatures and have less friction. We have brought with us and would be happy to show the committee and the members after the hearing our ceramic turbine components and other things that are being used today by the automotive industry as a result of our ceramics programs.

Mr. Chairman, these are just a few of the accomplishments that have resulted from research sponsored by the Federal Government and the private sector.

We must continue to look to the future and pursue those activities which will expand and improve our energy use options. The long-term solution to our energy problems is through improved technology.

We must improve both utilization efficiency and the capability to use alternative fuels. And the only way to obtain improved technology is through research. In this area of research, we think some crucial decisions should be made.

This is where the Congress and the Department of Energy need to work together. Together we need to be assured that every dollar appropriated for our research and development is used effectively. If we're going to spend more than the President requests, then we should maintain and enforce the conservation program and continue the sort of justified work that actually advances the national energy, environmental, and security interests, which will contribute to U.S. productivity and competitiveness.

If we do this, we can turn this budget reduction that we face into an opportunity to bring about more discipline and higher quality work in our research programs in the most effective and cost-efficient manner.

It is important that the decisions we make truly move the Nation toward greater energy efficiency.

Mr. Chairman, we appreciate this opportunity to appear before you, and we'll be happy to answer any questions that you and the committee would have.

Chairman **Byrd**. Thank you, Dr. Berg.

FLEXIBLE FREEZE

As I noted at the onset, the energy conservation budget we are discussing here this morning would receive no additional funds in President Bush's budget amendments.

Are there any decreases in the budget level which have been proposed by President Reagan as a result of the Bush flexible freeze proposal?

Dr. **Berg**. At this point, sir, we would like to answer the implications of the flexible freeze for the record, if we may.

[The information follows:]

Implications of the Flexible Freeze

All of the Department's fiscal year 1990 budget request which was not specifically highlighted in President Bush's Budget remains unchanged. In fact, if the Congress were to enact, as currently requested, the Department's programs subject to the flexible freeze, all these programs could be accommodated within their fiscal year 1989 outlay total. However, all the programs Government-wide that are subject to the flexible freeze must be balanced between the Administration and the Congress and we realize that this may require adjustments to DOE programs. Therefore, the Department continues to support its original request for the Energy Conservation appropriation but remains open to adjustments necessary for the overall balancing of the budget.

IMPACT OF THE FLEXIBLE FREEZE

Chairman **Byrd**. What is that now?

Dr. **Berg**. At this point, we are still studying what the changes are. At this time, we have no direct indication of what is going to happen as a result of flexible freeze.

The Department is in the process of studying what the flexible freeze implications have on the Department's programs.

When we have that answer, we will share it with you.

Chairman **Byrd**. So you're being put in the same position that the Appropriations subcommittees are being put in?

We have figures from Mr. Reagan's budget, but we have no corresponding line items in Mr. Bush's budget. And as a consequence, without the amendments, you're in no position to know what the effect is of the flexible freeze.

Is that a fair statement as far as you're concerned?

Dr. **Berg**. That's a fair statement as far as we're concerned.

Senator **McClure**. Can I ask a question out of turn?

Chairman **Byrd**. Yes.

Senator **McClure**. I had understood the President's statement to be that all programs would be frozen at last year's levels, plus inflation.

Was that your understanding?

Dr. **Berg**. This is my understanding, yes, sir.

Senator **McClure**. Then why is it so difficult for you to derive a figure?

Dr. **Berg**. As you're well aware, we have received additional authorization in areas of extreme importance to the Department, in the areas of nuclear cleanup and clean coal technology.

Where these funds come from and how they affect the rest of the programs has yet to be determined.

Senator **McClure**. You know what this current year's level is, do you not?

Dr. **Berg**. Yes, sir.

Senator **McClure**. If it's that plus inflation, that's a mathematical computation, is it not?

Dr. **Berg**. Again, sir, until we've had the chance to really assess where these are right now, our people are looking at the figures trying to actually determine what they are.

Senator **McClure**. You know, I hear the words, but they don't make any sense to me.

Chairman **Byrd**. We'll have Mr. Darman tomorrow before the full committee. And you'll have an opportunity there. Hopefully, we can get a little better understanding of this.

Senator **McClure**. I certainly understand that there's going to be a reallocation, and we want to know what the reallocation is. But, flexible freeze by itself does not imply reallocation, does it?

Dr. **Berg**. At this point, sir, I cannot give you a yes or no, until we've had a full opportunity to tell you what the consequences are.

Senator **McClure**. Oh, come on.

Chairman **Byrd**. What we're being asked to do, and Dr. Berg is in a similar position that the Senate is in, the President has said in his State of the Union Address, "We're going to do all these wonderful things—education, research," et cetera, et cetera.

He didn't give us the painful news. He said "We won't raise taxes—read my lips."

And here we're going to do all these wonderful things.

But, nothing was said about where this money was going to come from to increase these programs. That's where the flexible freeze comes in.

There's a whole list of items, totaling about $136 billion. I shouldn't say it's a list of items. There's $136 billion that is made up of the category of those accounts which will have to pay for the increases elsewhere. We're not told where to make those cuts. That's where they said: "Let's negotiate about that."

And within that $136 billion, presumably some of those could even be increased wherever you increase those, and also where those programs, where those items have been increased where the President called attention to them.

Congress is left with the bitter pill of having to determine where the cuts will be made in order to fund increases.

Now, that's the flexible freeze. These accounts were frozen but they're flexible in that you can cut them in order to find the money to pay for these items.

Now, you're in a position of not knowing where those cuts are supposed to come. That's exactly what I said to Mr. Darman in the letter:

Until you send us the figures to fill in the blanks, your Department and agency heads won't be able to tell us and we won't know.

STEEL AND ALUMINUM INITIATIVE

Let's move on to a discussion of the steel and aluminum initiative.

Steel and aluminum are important to my State of West Virginia. Weirton Steel employs approximately 8,000 workers and has recently announced a 3-year $600 million modernization program.

Wheeling-Pitt employs another 6,500 people making steel, principally for the construction market.

Ravenswood Aluminum, an established plant with new ownership, and a new name as of a few weeks ago, has some 2,000 workers.

So, steel and aluminum are big business in West Virginia. Our plants are gaining economic vitality, too, as evidenced by the modernization activities at Weirton Steel. So I'm very interested as a Senator from West Virginia in your steel and aluminum research.

The initiative offers the promise of new technologies that may make our industry more competitive in the international markets.

I believe that the cost-shared projects under the initiative are an excellent example of Government cooperation with industry.

I hope that you will go out of your way to extend this cooperation specifically to our steel and aluminum industry in West Virginia.

The fiscal year 1990 budget includes a request for $1 million for the steel initiative. I believe that this is the first time that the Department has requested funds for the steel or subsequent metal initiatives.

Is that correct?

Dr. **Berg**. That's correct.

Chairman **Byrd**. What prompted this change of heart?

Dr. **Berg**. I think two things, sir. First, the fact that working together we came up with the concept that projects had to be cost shared. Second, as a result, industry has come forward with some very good cost-shared programs that we feel can and should be supported.

Chairman **Byrd**. The total required funding for the several steel initiatives—the electro-magnetic casting of steel and the spray casting of steel, the super-plastic steel process and direct steelmaking, amounts to $13.2 million.

The funding for fiscal year 1990 eliminates the electro-magnetic casting initiative and provides $3 million for spray casting and $1.1 million for super-plastic steel processing, and $7.8 million, making a total of $11.9 million.

Does the Department expect the full $13.2 million appropriated to date for the steel initiative will be obligated by the end of this fiscal year?

Dr. BERG. Yes; we anticipate that all previously appropriated funds will be obligated this year.

We have, as you indicated, three projects which are either started or have been negotiated. These projects, in addition to the electro-magnetic coating project which has been terminated, account for all of the funds appropriated to date.

STEEL INITIATIVE PROJECTS

Chairman BYRD. You have two or three ongoing steel initiative projects.

Dr. BERG. We actually have two ongoing projects, super-plastic steel processing and spray casting. A third, on direct reduction is being negotiated with the American Iron and Steel Institute.

Chairman BYRD. It has been negotiated?

Dr. BERG. It is being negotiated.

Chairman BYRD. I've mentioned four projects. If one had been dropped, why has that one been eliminated?

Dr. BERG. This was eliminated because industry felt that the combination of very high risk and substantial funding requirements were not consistent with cost sharing.

Chairman BYRD. That's the electro-magnetic casting of steel?

Dr. BERG. Yes, sir.

Chairman BYRD. The other three projects—the superplastic steel, the spray casting, the direct steelmaking—are those on track?

Dr. BERG. Yes, sir; as a matter of fact, super-plastic steel is now being cofunded by three corporations.

PRIORITIES FOR METALS INITIATIVE

Chairman BYRD. Which is your highest priority among those three?

Dr. BERG. I suppose right now it would be the one which is ongoing, which is the super-plastic steel.

Chairman BYRD. Would you provide a brief description of each of the current projects under this metals initiative? A brief description of each process and explanation of its significance? And the total estimated project cost.

Dr. BERG. I believe we have provided out-year funds for the committee. The superplastic steel project seeks to establish the way that the steel can be superplastic in subsequent forming operations. Because the steel is superplastic, less energy is required to make steel parts.

Spray casting is actually spraying the steel onto a surface to form a cast plate on to a cold roll, which reduces the amount of rolling and reheating that is necessary. And, of course, direct reduction means energy savings; it actually is a shortcut to producing the iron.

Chairman **Byrd**. That isn't exactly the kind of explanation I was seeking. The super-plastic steel process refers to pliability of steel as it cools. Super-plastic steel can be pushed into finished shapes, such as gears with teeth much like clay can be pushed into a mold.

Normal steel does not have this pliability when it cools. It, therefore, requires more energy to keep it moving while it is being poured into the various shapes.

In many cases, the finished product must be tracked with hard steel, which is a relatively expensive and a time-consuming process.

As to the spray casting of steel, this is an ongoing project which, as its name implies, uses nozzles to spray the steel directly into the shape in which it is used.

For example, in making a 1-inch thick steel slab, the area to be formed can be passed back and forth through the nozzle spraying steel, much like a can of spray paint, several times, until the thickness accumulates to the desired level.

For the thinner steel slabs, spray nozzle would make fewer passes and the product would be less thick than it would with more passes.

Is that an accurate description of the process?

Dr. **Berg**. Yes, sir; I will provide a description of our projects for the record.

[The information follows:]

Steel Initiative Project Descriptions

Two projects have begun with Steel Initiative funding. These are: (1) Development of superplastic steel processing technology; and (2) Research and development of steel spray forming technology. A third project, on direct steelmaking, is being negotiated. The following are descriptions of these three projects.

A. DEVELOPMENT OF SUPERPLASTIC STEEL PROCESSING

This research is being managed by the Lawrence Livermore National Laboratory.

Objective.— Develop a composition and processing sequence to produce superplastic steel on a production scale, using the ultrahigh carbon steel (UHCS) concept developed by Professor Sherby at Stanford University.

Description.—This project effort involves both laboratory scale and plant scale development. A preferred composition is to be produced in an industry laboratory, prior to casting of the same composition through a production strand caster. The strand cast billets will be rolled on production rolling mills, using a sequence determined by laboratory hot working trials. Finally, forgings will be made and evaluated.

UHCS steels can be hot worked to produce an extremely fine-grained microstructure. The presence of spherodized carbides allows the material to retain the fine grain structure at typical forging temperatures, leading to superplastic behavior. These steels have been processed in small batches in university laboratories, and have exhibited the desired superplastic properties. The issue is whether or not this technology can be scaled up to work on a production level.

Significance.—The successful development of this technology is important for achieving the production of near net shape forgings. The design of forged parts currently is greatly influenced by the behavior of the steel during the forging process. Limitations in the ability of steel to deform in intricate impression dies result in significantly more material being used to make parts. This excess material must subsequently be removed by costly machining. Near net shape forging would greatly reduce the amount of wasted material per part. It is estimated that the resulting energy savings would amount to 0.05 quads annually. This and other associated productivity improvements would enhance the competitiveness of the forging industry.

Status.—Work on the 18 month Phase I started in March 1988.

Funding.—Obligated to date (DOE), $1.5 million; Industry Cost Sharing for Phase I, $ .9 million; Phase II DOE costs if decision made to proceed $1.8 million.

B. SPRAY FORMING STEEL

This research effort is being conducted by the Idaho National Engineering Laboratory (INEL), Oak Ridge National Laboratory (ORNL), and Massachusetts Institute of Technology (MIT). Eight companies have agreed to share the costs of this project.

Objective.—Development of a spray forming process for the continuous production of low carbon steel sheet and strip that requires less energy and lower capital investment; produces steel sheet/strip at a significantly lower cost; and is a logical step in process development.

Description.—Spray forming is a process in which liquid metal is converted into a spray of droplets which are cooled in flight and compacted against a substrate to form a near net shape solid, such as a tube or a flat sheet. The work proposed is for a two phase development project over a period of 5 years. Phase I, which will take 2 years, will include the development of quantitative diagnostic methods, bench-scale nozzle development, and comparative evaluation of three different spray forming concepts. It will culminate in design of a pilot-scale spray forming system. Phase II, a 3-year effort, will lead to the development and proof of concept at the pilot scale level.

Significance.—The conventional production flowsheet for steel strip is energy and capital cost intensive, requiring slab casting, reheating, roughing and hot rolling. The current process flowsheet is a batch type. The steel industry consumes 1.7 quadrillion Btu annually for the production of finished steel. Conventional sheet production from molten steel consumes about 22 percent of this total. New conventional slab casting and associated rolling facilities for sheet production require about $300 per annual ton of installed capacity. Refurbishing costs of rolling facilities can amount to 40 percent of the cost of new facilities.

The successful development of the proposed concept would lead to a commercial plant for continuous production of sheet and strip steel. The requirement for slab casting, reheating and hot rolling facilities would be eliminated. Energy saving potential of 0.2 quadrillion Btu annually has been estimated. Production costs could be reduced by 10 percent. In addition, increased efficiency in production of coated products is anticipated from a better understanding of the spray forming process.

Status.— INEL was authorized to proceed in February 1989.

Funding.—Prior year funds obligated, $1.45 million; fiscal year 1990, $3 million; fiscal year 1991, $1.2 million. If a decision is made to continue to Phase II, additional DOE funding would be: fiscal year 1991, $4.8 million; fiscal year 1992, $6 million; fiscal year 1993, $5.6 million.

C. DIRECT STEELMAKING

This project has been proposed by the American Iron and Steel Institute (AISI).

Objective.—Development of a coal based, continuous steelmaking process that requires less energy and lower capital investment; produces molten steel at a significantly lower cost; and is a logical step in process development.

Description.—This 3 year project is based on smelting/reduction of partially reduced iron ore fines and pellets to produce liquid metal. The liquid metal (iron) is to be continuously desulfurized and decarbonized to produce liquid steel. The concept envisioned could use scrap to supplement a portion of the ore-based iron units. Thermodynamics, heat transfer, and physical chemistry will be determined to resolve the following technical issues:

Process kinetics for in-bath smelting/reduction of ore-based iron units with coal.

Effective transfer of heat to the bath from post combustion of the smelting/reduction gases.

Continuous desulfurization and decarbonization to produce liquid steel that requires only finishing treatment utilizing conventional equipment.

Flexibility with respect to the use of iron ore and scrap as a source for iron units.

Availability of refractory materials.

Significance.—The conventional ore-based steel production flowsheet is energy and capital cost intensive; requires ore agglomeration, coke ovens, blast furnaces, and basic oxygen steelmaking facilities; and is a batch type process. The steel industry consumes 1.7 quadrillion Btu annually for the production of finished steel. The ore-based liquid steel production consumes about 60 percent of this total. New coke plants require a capital investment of about $275 per annual ton of coke, or $275 million for an average plant. Refurbishing costs of a coke plant are about 40 percent of the cost of new facilities. Meeting environmental requirements will add further to the cost of coke ovens, if such requirements can be met at all.

The successful development of the proposed concept will lead to a commercial scale, iron-ore based, plant for continuous production of liquid steel. The current coke oven, blast furnace and basic oxygen furnace steps would be replaced by a single step.

Energy saving potential of 0.2 quadrillion Btu annually has been estimated. Production costs are expected to be reduced by 10 percent. Capital costs of greenfield facilities based on the proposed process development could be only 50 percent of the cost to place conventional facilities on a greenfield site, and almost equal to refurbishing aging conventional facilities. Facilities based on the new process could be refurbished at a much lower cost, thus reducing considerably the life-cycle costs in comparison to conventional technology.

Increased efficiency of current basic oxygen steelmaking is anticipated from a better understanding of smelting/reduction and the post-combustion phenomenon. Development of continuous molten iron refining technology could also benefit existing processes.

Status.—The proposal has been approved for a financial assistance award and negotiations are underway.

Funding.—Prior year funds obligated $8 million; fiscal year 1990, $7.8 million; fiscal year 1991, $5.6 million; fiscal year 1992, $1.023 million. Industry cost sharing, $6.7 million.

DIRECT STEELMAKING

Chairman **Byrd**. Now, would you tell us about the direct steelmaking? Could you tell us about that concept?

Dr. **Berg**. That is in the process of negotiation. And we expect that process to be completed in the spring.

Chairman **Byrd**. Those are the negotiations that are going forward with the American Iron and Steel Institute?

Dr. **Berg**. Yes.

Chairman **Byrd**. What about the direct steelmaking?

Mr. **Streb**. Direct steelmaking is an alternative process. It basically combines the functions now accomplished by the blast furnace and the coke oven into a single vessel process that produces a material which is close to finished molten steel.

It basically involves the injection of coal and other materials directly into the molten material with the injection of oxygen into the vessel at the same time.

The advantages to the steel industry are tremendous, both in terms of energy savings which occur as well as environmental benefits.

Everything is contained within a single steelmaking vessel, with much reduced demand for capital in terms of the creation of new facilities.

We're very excited about this concept, which the entire world's steel industry would love to have. We think this program will put our industry at the leading edge.

Chairman **Byrd**. So you're able to bypass the coke process.

Mr. **Streb**. That's correct.

Chairman **Byrd**. From the environmental standpoint and also from the standpoint of economics, you're cutting some corners.

Mr. **Streb**. That's right.

Chairman **Byrd**. That will be very beneficial.

FUNDING REQUEST FOR STEEL

Why have you requested only $1 million?

Dr. BERG. For the fiscal year 1990 budget?

Chairman BYRD. Yes, sir.

Dr. BERG. The answer to that is that, at that point in time, we would be able to complete a pilot facility by combining the $1 million with already appropriated funds that have not yet been spent.

Chairman BYRD. If Congress were to add funds to the energy conservation R&D budget, would the steel and aluminum initiative be your highest priority area to spend those additional funds?

Dr. BERG. They are on our priority list. One of the first ones we would have back would be the program for the study of substitutes for CFC's.

Chairman BYRD. What's CFC?

Dr. BERG. Chlorofluorocarbons. The steel, I should point out, would be our first priority item.

Chairman BYRD. All right. So that others may have some time to question, I will defer my other questions for the moment.

Senator McClure.

Senator MCCLURE. Thank you very much, Mr. Chairman.

FUNDING PRIORITIES

Mr. Berg, in response to a question during the fiscal year 1989 hearing, the Department provided the subcommittee a list of priorities established in the internal budget review process. Although it's hard to tell, it appears that many of these priorities eventually were funded in the appropriation process, but have not been requested in the fiscal year 1990 budget.

For instance, no funds have been requested for the second industry team to work on the automotive gas turbine, even though it is priority No. 26 out of 115.

If the subcommittee were to ask for a new set of priorities, would they be drastically different from last year's?

Dr. BERG. No, sir; they would be very similar.

Senator MCCLURE. Are some of the lower priorities also funded in the appropriation process included in the fiscal year 1990 budget?

Dr. BERG. Lower on the priorities? To my knowledge, I don't believe so.

Senator MCCLURE. Could you please provide for the record a listing of highest priority projects above the President's budget for fiscal year 1990?

Dr. BERG. I'll be happy to, sir.

[The information follows:]

PRIORITY ADDBACKS TO CONSERVATION FISCAL YEAR 1990 BUDGET

The attached chart provides a consolidated listing of the highest priority projects within Conservation that could be carried out if additional funds were available in fiscal year 1990. This represents an increment of $23.6 million for a total Conservation Research and Development (R&D) budget of $111.6 million. The $111.6 million level is actually $3.8 million more than the AS/CE Request level as reflected in the Budget History Tables. The $3.8 million is attributed primarily to added support of the Alternative Motor Fuels Act of 1988 and the Small Business Innovative Research Program.

Beyond this level, which was supported by the Assistant Secretary for Conservation and Renewable Energy during the internal Departmental budget planning process, the Conservation R&D program offices prepared planning budgets which included increments beyond this level. These were never consolidated into a ranking or supported by the Assistant Secretary, but were ranked by the individual program offices. Portions of these program priority lists are also included. These additional program activities, if funded, would result in a total Conservation budget level of $194 million.

FY 1990 PRIORITY ADD BACKS
ENERGY CONSERVATION
$000

DAS/C RANK	DECISION UNIT	ITEM AMOUNT	ITEM	DECISION UNIT TOTAL	CUMULATIVE TOTAL	DESCRIPTION
				PRESIDENT'S REQUEST	$87,964	
1	INDUSTRY	$1,000	STEEL INITIATIVE	$17,130	$88,964	Complete 5-ton per hour reduction smelting unit and continuous refining vessel
2	MULTI-SEC.	$100	PROGRAM ANALYSIS FOR CONSERVATION	$24,203	$89,064	Allow planning and analysis for all Conservation programs
3	MULTI-SEC.	$950	ENERGY RELATED INVENTIONS PROGRAM	$25,153	$90,014	Restore invention evaluations and assistance to FY 1989 level
4	POLICY & MANAGEMENT	$100	POLICY AND MANAGEMENT SUPPORT	$2,506	$90,114	Support mandated personnel floors
5	TRANSPORTATION	$273	PROGRAM DIRECTION	$30,027	$90,387	Provide for 4 FTEs required by the Alternative Motor Fuels Act
6	TRANSPORTATION	$350	ALTERNATIVE FUELS UTILIZATION	$30,377	$90,737	Continue investigations of basic combustion phenomena to existing engine types to establish fuel/engine features for efficient use of minimally upgraded synthetic crudes
7	TRANSPORTATION	$1,840	ALTERNATIVE FUELS DEMONSTRATION	$32,217	$92,577	Restores funds for all tasks identified in the Alternative Motor Fuels Act to level required to meet the schedule included in the Act

FY 1990 PRIORITY ADD BACKS
ENERGY CONSERVATION
$000

DAS/C RANK	DECISION UNIT	ITEM AMOUNT	ITEM	DECISION UNIT TOTAL	CUMULATIVE TOTAL	DESCRIPTION
8	TRANSPORTATION	$430	A.C. PROPULSION SYSTEM DEVELOPMENT	$32,647	$93,007	Continue propulsion system development for reducing inverter and motor costs and integrating battery systems into a vehicle
9	INDUSTRY	$1,200	LOW TEMPERATURE PROCESS SENSORS	$18,330	$94,207	Continue R&D on industry in-line process sensors for steam flow, and measuring and controlling fertilizers, pesticides and water in agriculture
10	INDUSTRY	$500	BIOTECH APPLIED TO WASTE WATERS	$18,830	$94,707	Research consortium of food processors and plastic manufacturers for the conversion of starch to lactic acid from potato waste to produce biodegradable plastic
11	INDUSTRY	$900	BLACK LIQUOR PROCESS TECHNOLOGY	$19,730	$95,607	Continuation of cost-shared R&D for recovery of energy and material value from paper industry black liquor
12	INDUSTRY	$1,700	GASEOUS WASTE UTILIZATION	$21,430	$97,307	Continue high risk, cost-shared gaseous waste utilization R&D of hydrogen and sulfur recovery from hydrogen sulfide waste gas
13	BCS	$1,400	ALT REFRIGERANTS/ADV.REFRIGERATION	$16,971	$98,707	Research on non-chlorofluorocarbons and new refrigerants and foaming agents for foamed board insulation

FY 1990 PRIORITY ADD BACKS
ENERGY CONSERVATION
$000

DAS/C RANK	DECISION UNIT	ITEM AMOUNT	ITEM	DECISION UNIT TOTAL	CUMULATIVE TOTAL	DESCRIPTION
14	TRANSPORTATION	$400	CFC REDUCTION RESEARCH	$33,047	$99,107	Initiate research supporting R&D options to reduce CFC emissions used in the transportation sector
15	TRANSPORTATION	$1,400	ALTERNATIVE FUELS/SYNFUELS PERF.	$34,447	$100,507	Initiate R&D of multicylinder engine combustion characteristics, parameters of fuel-flexible engines and design of optimized fuel-flexible engine
16	MULTI-SECTOR	$500	ENGINE COMBUSTION	$25,653	$101,007	Reinstate research to aid development of advanced direct-injection engines capable of in-cylinder control of particulate emission.
17	MULTI-SECTOR	$600	CONTINUOUS COMBUSTION	$26,253	$101,607	Reinstate spray and droplet combustion experiments for development of combustion system models.
18	MULTI-SECTOR	$1,900	HIGH TEMPERATURE MATERIALS	$28,153	$103,507	Allow research to provide technical support to the development of ductile ordered metallic alloys
19	MULTI-SECTOR	$900	MATERIALS PROCESSING TECHNOLOGY	$29,053	$104,407	Research into microwave sintering as a means of manufacturing ceramic material and composites

FY 1990 PRIORITY ADD BACKS
ENERGY CONSERVATION
$000

DAS/C RANK	DECISION UNIT	ITEM AMOUNT	ITEM	DECISION UNIT TOTAL	CUMULATIVE TOTAL	DESCRIPTION
20	BCS	$1,100	INDUSTRIALIZED & ADV. RES. HOUSING	$18,071	$105,507	New research initiative in industrialized housing to identify, develop and test with industry, manufacturing technologies to produce more energy efficient housing
21	BCS	$800	LIGHTING APPLICATIONS AND IMPACTS	$18,871	$106,307	Research into optimum lighting system design, effective integration of lighting and HVAC systems and improved fixtures to produce energy savings; and impact of lighting systems on health and productivity of humans.
22	TRANSPORTATION	$850	ADVANCED LEAD-ACID BATTERY	$35,297	$107,157	Continue research, demonstration and evaluation of advanced lead-acid batteries for transportation applications
23	BCS	$1,000	FEMP - FEDERAL BLDGS. EFFICIENCY	$19,871	$108,157	Technical analysis and assistance to agencies in decisions on use of advanced energy efficiency technologies
24	TRANSPORTATION	$500	MAGNETICALLY LEVITATED VEHICLES	$35,797	$108,657	Continue preliminary assessments on magnetically levitated vehicles with detailed analysis and planning

FY 1990 PRIORITY ADD BACKS
ENERGY CONSERVAT:ON
$000

DAS/C RANK	DECISION UNIT	ITEM AMOUNT	ITEM	DECISION UNIT TOTAL	CUMULATIVE TOTAL	DESCRIPTION
25	INDUSTRY	$500	TECH. ASSESSMENT AND TRANSFER	$21,930	$109,157	Allow dissemination of research results through expanded technology transfer efforts; technology assessments of new initiatives as well as energy/economic impacts
26	TRANSPORTATION	$800	TECH. ASSESSMENT AND TRANSFER	$36,597	$109,957	
27	BCS	$800	TECH. ASSESSMENT AND TRANSFER	$20,671	$110,757	
28	INDUSTRY	$400	MEMBRANE TECH. DEVELOPMENT	$22,330	$111,157	Continue development of advanced membrane technologies to make industrial separation processes more energy efficient
29	MULTI-SECTOR	$450	THERMODYNAMICS/FLUID SYSTEM	$29,503	$111,607	Initiate research to investigate alternative conversion technologies, such as advanced magnetic conversion cycles, solid-state and chemically reactive working media

ABOVE BASED ON FULL RECOVERY OF OMB CUTS AND ADDITION OF PRIORITY ITEMS UP TO THE ASCE PROGRAM PLANNING LEVEL.

NEED FOR ITEM *15 PARTIALLY OBVIATED BY ALTERNATIVE FUELS FOR TRANSPORTATION PROGRAM - ITEM 7.

FISCAL YEAR 1990 PROGRAM PRIORITY RANKING

[In thousands of dollars]

Activity element	Fiscal year 1990 funding	
	Increment	Cumulative
BUILDINGS AND COMMUNITY SYSTEMS		
Priority Program Planning Level	20,671	20,671
Advanced Refrigeration Systems	500	21,171
Least-Cost Utility Planning	1,300	22,471
Fenestration and Daylighting	1,000	23,471
Indoor Air Quality, Infiltration and Ventilation	1,000	24,471
Building Performance Simulation	200	24,671
Lighting Equipment Research	700	25,371
Building Materials	500	25,871
Retrofit Research	1,143	27,014
Federal Energy Management Program	1,000	28,014
Oil Heating Equipment Research	400	28,414
Walls and Foundations Research	500	28,914
Absorption Heat Pump Research	1,400	30,314
Stirling Engine Heat Pump	300	30,614
Free Piston, I.C. Engine Heat Pump	300	30,914
Roof Research	400	31,314
Program Direction	1,000	32,314
Appliance Standards	100	32,414
Standards and Guidelines	100	37,514
Capital Equipment	400	32,914
INDUSTRIAL PROGRAMS		
Priority Program Planning Level	22,300	22,300
Increment Steel Initiative [1]	10,000	32,300
Increment Program Direction	500	32,800
Increment National Lab Support	1,200	34,000
Increment Analytical Support	600	34,600
Increment Heat Exchangers and Materials	900	35,500
Increment Electrolytic Processes	1,500	37,000
Increment Improved Combustion Technology	600	37,600
Increment Advanced Heat Pump Technology	2,200	39,800
Increment Extraction and Drying	2,000	41,800
Advanced Steel Process Research	2,000	43,800
Increment Advanced Topping Cycle Turbine Systems	3,000	46,800
Increment Solid Wastes Utilization Conversion	1,400	48,200
Increment Direct Thermal to Electrical Conversion	700	48,900
Increment Low Temperature Process Sensors	1,600	50,500
Energy Analysis and Diagnostic Centers	1,700	52,200
Increment Technology Transfer	500	52,700
Refractories R&D	800	53,500
Extraction and Conversion of Industrial Wastewaters	900	54,400
TRANSPORTATION		
Priority Program Planning Level [2]	36,597	36,597
EV Propulsion—ETX	2,000	38,597
Gas Turbine Ceramic Components	7,000	45,597
EV Lab and Dyno Test & Eval	1,700	47,297
EV In-use Test and Eval	320	47,617
PEM Fuel Cell R&D	650	48,267
Ceramic Materials and Processing	2,400	50,667
Ceramic Data Base and Life Pred	2,270	52,937
Adiabatic Diesel	2,770	55,707
Program Direction	855	56,562
Management and Planning Support	300	56,862
Tech. Eval., Analysis and Planning	100	56,962
EV National Lab Mgt. Support	530	57,492
HTML Support	580	58,072
CFC Reduction Research	600	58,672
Capital Equipment	2,500	61,172

FISCAL YEAR 1990 PROGRAM PRIORITY RANKING—Continued

[In thousands of dollars]

Activity element	Fiscal year 1990 funding	
	Increment	Cumulative
Nickel-Iron Battery Develop	600	61,772
EV Propulsion—DSEP	500	62,272
MULTISECTOR		
Priority Program Planning Level	29,503	29,503
Program Analysis for Conservation [1]	100	29,603
Program Direction [3]	621	30,224
Engine Combustion [3]	530	30,754
Continuous Combustion [3]	470	31,224
Materials-by-Design [3]	1,000	32,224
Lightweight Materials [3]	1,900	34,124
Inventions Program [3]	1,100	35,224
Corrosion Resistant Materials [3]	3,300	38,524
Thermally Insulating Materials [3]	1,300	39,824
Materials Processing Technology [3]	2,100	41,924
Materials System Reliability	2,600	44,524

[1] This increment was not included in the fiscal year 1990 IRB, but has since been determined to be necessary.

[2] The priority program planning level includes the total budget amendment of $3,613M requested for implementation of the Alternative Motor Fuels Act of 1988.

[3] Represent funding increments.

AUTOMOTIVE STIRLING ENGINE

Senator McClure. In fiscal year 1989, $1 million was added for the Stirling engine to evaluate performance and reliability of design for the Mod 2 engine and to support selected technology transfer activities for industry and Government.

Since this program is well beyond the research and development phase, these funds were added on the assumption that this would be truly the last time funds would be added to this effort.

The success of the Stirling program does not rest on additional research, but on the ability of the private sector to assimilate the research program and put it into commercial application.

Yet, if a manufacturer cannot identify a user, it is unlikely that that manufacturer will be too interested.

It is disappointing to note that Mechanical Technologies Inc. testified before this subcommittee and requested that an additional $2.5 million be provided for the Stirling engine.

How will $1 million added for fiscal year 1989 help commercial application?

Dr. Berg. We have continued the testing of the Stirling engine. We frankly do not foresee any indication by the industry of interest in this engine.

Senator McClure. Will the Post Office or Air Force be interested to proceed with commercial development?

Dr. Berg. No, sir.

Senator McClure. What will an additional $2 million do for the Stirling engine program?

Dr. Berg. Really not much.

AUTOMOTIVE GAS TURBINE

Senator McClure. You have again requested $5 million in fiscal year 1990 to continue ceramic development of the automotive gas turbine. As in previous years, you have requested from one industry team rather than the two-industry team in the past.

I note that, in fiscal year 1989, the second industry team for this project was ranked No. 26 in last year's priority list.

Would this be a similar priority in fiscal year 1990?

Dr. Berg. Yes, sir.

Senator McClure. What is the cost share for this program, the overall industry investment in the technology?

Dr. Berg. The cost sharing by the contractors and subcontractors is 20 percent of that program. I believe, since its inception, it's been close to $20 million. It started out at about 6 percent cost sharing.

Senator McClure. Is the industry effort directly related to the engine or the large amount of spinoffs?

Dr. Berg. It's directly related to the engine itself. It's also true that there are a large number of spinoffs.

WASTE UTILIZATION

Senator McClure. The fiscal year 1988 justification indicated that you are initiating hydrated pyrolysis for paper mill sludge. In response to a question during the fiscal year 1989 hearing, you indicated that this paper mill sludge in fiscal year 1989 shows promise of yielding high-valued chemical precursors. Funds would be requested to continue this work in fiscal year 1990.

Have you conducted these tests yet?

Dr. Berg. They have not been conducted. We have a problem of getting a reactor to make the adhesive. The requested funds are for a new reactor to be installed.

Senator McClure. Any timetable on that?

Dr. Berg. Yes, sir.

Senator McClure. Within the coming year?

Dr. Berg. Yes, sir.

Senator McClure. But you don't anticipate any further progress in it in that? In other words, there's a slip of a year in a program?

Dr. Berg. There's a slippage of about 6 months.

Senator McClure. The heat value was estimated at 20 trillion Btu's per year in the fiscal year 1989 justification.

Is that still an accurate estimate?

Dr. Berg. That's an accurate estimate, sir.

Senator McClure. What is the fiscal year 1990 request for this project?

Dr. Berg. The reactor and mill sludge work is $280,000 of the $400,000 request.

Senator McClure. What are your funding and research plans for this project in fiscal year 1990 and beyond?

Dr. Berg. The $400,000 for the reactor and adhesive feedstock activity.

Senator McClure. What will you do after that?

Dr. Berg. That will be determined by what is proposed from the cooperative work with the industry.

Senator **McClure**. So you've slipped 6 months. But, in effect, you've really slipped about 1 year on that.

Is that correct?

Dr. **Berg**. Yes, sir.

Senator **McClure**. That's about where we thought we'd be.

Dr. **Berg**. That's right.

ADHESIVES FROM WOOD WASTE

Senator **McClure**. For the past 2 fiscal years, you've been developing and testing a process to replace petroleum adhesives with wood wastes for use in wood products.

It's my understanding that these tests have been successful.

Can you briefly discuss the tests and the energy-saving potential from this research?

Dr. **Berg**. Yes, sir; we've had excellent results. The results are considered by Weyerhaeuser and other private manufacturers who are in the process of testing.

We have cooperative work going in the industry.

It does show potential for actually replacing the petrochemical resins that are used currently with fibers and wood products.

Senator **McClure**. What's planned for fiscal year 1990?

Mr. **Streb**. A total of $1.3 million for that entire category of work, which includes the sludge pyrolysis that we discussed before as well as the pyrolysis of wood wastes and phenol and one other area of activity that relates to the metal industry.

Senator **McClure**. Can you break that down as between those activities? Can you do that for the record?

Mr. **Streb**. We will do that for the record.

[The information follows:]

Wood Waste Research for Replacing Petroleum Adhesives

The $1.3 million in the fiscal year 1990 request covers four projects in the liquid/solid waste conversion area, one of which involves adhesives from industrial wastes. Included in the $1.3 million is $500,000 for removal of contaminants from recycled steel and aluminum, $60,000 for conversion of cheese whey waste to ethanol $330,000 for the use of waste tires in polyurethane and polyethylene composites, and $410,000 for the conversion of industrial wastes (sludges, tire rubber, and black liquor via high rate pyrolysis to precurser chemicals for adhesives and insulation products). In this latter category is included a small amount of funds, $130,000, to conduct continued processing of wood wastes for adhesives development.

Adhesives from Wood Wastes is a joint project with the Office of Industrial Programs and the Solar Energy Research Institute (SERI). This project is now in its third year of funding and we are in the process of forming an industrial consortium to cost-share funding and commercialize proved technologies. The energy benefit is conservatively estimated to be 80 trillion Btu's per year with a reduction of adhesive costs from 25 to 50 percent.

SERI has successfully run a continuous extraction system to obtain a phenolic-rich fraction bark and sawdust wood waste pyrolysis oils. The phenolics fraction from wood is an ingredient identical to one in adhesives used in making plywood, chipboard, and moldings. Wood wastes can thus displace present adhesives derived from petroleum. It is projected that $3.9 million of additional funds will be needed to complete the Wood Wastes to Adhesives program.

FUNDING FOR WASTE UTILIZATION

Senator **McClure**. Are additional funds necessary to continue this program beyond your current plans?

Dr. **Berg**. Yes; we'd have to answer for the record.

Chairman **Byrd**. What is the answer?

Dr. **Berg**. Yes, sir; there are more funds required to continue; we'd have to answer, beyond that, for the record.

Chairman **Byrd**. But, for fiscal year 1990, can additional funds be used?

Dr. **Berg**. Additional funds can be used, yes, sir.

Chairman **Byrd**. How much?

Dr. **Berg**. $500,000 total.

Chairman **Byrd**. How would the $500,000 total be spent?

Mr. **Streb**. That would bring the total to $1.8 million, which would be applied to all four of the liquid/solid waste areas—the sludge pyrolysis and a few other areas of waste.

Chairman **Byrd**. Which of those areas have the priority?

Mr. **Streb**. In my judgment, the wood waste to adhesive is probably the highest priority. The sludge pyrolysis work also has great promise.

Actually, all four of the areas certainly have great promise.

CFC REPLACEMENTS

Senator **McClure**. You mentioned a little earlier in responding to a question by the chairman that you are doing some work with CFC replacements in the Buildings and Community Systems Program to develop a plan for Federal research on CFC substitutes.

In addition, the report on a joint public/private workshop on alternatives to insulation containing CFC will be published as I understand.

What is the status of the research plan?

Dr. **Berg**. The research plan, as indicated, will be published. Both industry and DOE have been working on replacements for CFC's in the refrigeration cycle, especially working on various types of mixtures. Industry has had some promising results in coming up with potential refrigerant replacements.

However, at this point, further work must be done, such as testing the refrigerant in actual equipment to make sure what its reaction in the system will be.

Senator **McClure**. When do you expect that study to be completed?

Dr. **Berg**. The study on the materials for refrigerants is in draft. Are you talking about the refrigerants?

Senator **McClure**. The insulation.

Dr. **Berg**. The insulation report is in draft.

Senator **McClure**. And that will be finished in 60 days?

Dr. **Berg**. Two months.

Senator **McClure**. What funds have been identified for this area?

Dr. **Berg**. For the effort on insulation we have none.

Senator **McClure**. Is there any reason you have not identified them?

Dr. **Berg**. As I said in response to one of the prior questions, we do not have funding for that priority.

Senator **McClure**. The justification for fiscal year 1990 indicates that while it's technically possible to reduce energy consumption in the buildings sector by 17 quads by the year 2010, the economic potential is approximately 11 quads.

How did the problem with CFC's factor into your analysis?

Dr. **Berg**. The CFC's reductions had not been factored in at that point. However, based on the studies that we have going on on the alternatives, we think we could come within a matter of break-even if the advanced technologies that we're working on come into existence.

Senator **McClure**. Mr. Chairman, I'll reserve the balance of my questions to be submitted in writing for response.

Chairman **Byrd**. Thank you, Senator McClure.

Senator Bumpers.

Senator **Bumpers**. Thank you, Mr. Chairman.

BUDGET PRIORITIES

Dr. Berg, as I look over this budget and the dramatic cuts in almost every category, I don't know that I quarrel with all of it. Certain parts I would certainly quarrel with.

Were you given by OMB just a certain amount of money within which you came up with these allocations? Did they tell you you had to cut your budget by 50 percent?

Dr. **Berg**. The Department, of course, receives a number within which we have to allocate. We receive certain numbers. We appealed some of these numbers.

Senator **Bumpers**. You appealed some of the numbers, I take it, with no success?

Dr. **Berg**. We did have some success in terms of development funds.

Senator **Bumpers**. What was your highest priority in appealing to OMB?

Dr. **Berg**. We had activities in the areas of transportation and the industrial programs.

Chairman **Byrd**. Could you specifically state for the record? I think we're entitled to have that. I think we ought to have it laid in the record.

Senator **Bumpers**. Go ahead. What was your highest priority on the appeal?

Dr. **Berg**. We wanted to continue work which was cost shared with industry that had a direct bearing on some of the industrial processes that we're working on.

Senator **Bumpers**. What are those projects besides steel?

Dr. **Berg**. Some of the work is in the waste area. We'd have to supply the entire listing.

Senator **Bumpers**. Would you please do that?

[The information follows:]

Appeals to OMB on Fiscal Year 1990 Budget

In the Department of Energy's (DOE) fiscal year 1990 budget submission to the Office of Management and Budget (OMB), the following items were appealed:

[In thousands of dollars]

	Amount appealed	Amount restored
Transportation:		
EV National Laboratory Management Support	570	570
Alternative Fuels	150	150
Industrial Energy Conservation: Liquid/Solid Waste Conversion	1,300	1,300
Subtotal Conservation R&D	2,020	2,020
State and Local Assistance Programs: Program Direction	5,086	
Total Energy Conservation	7,106	2,020

CLEAN COAL TECHNOLOGY

Senator BUMPERS. Where is clean coal technology? Do you have that?

Dr. BERG. No, sir.

HYDROELECTRIC ENERGY

Senator BUMPERS. How about hydro?

Dr. BERG. Hydro is in our area. That's in our Renewable Energy Program.

Senator BUMPERS. I understand that, sir, but I can't find any money for any hydro research promotion or development or anything.

Dr. BERG. No, sir; that hasn't been in the budget for a couple of years.

Senator BUMPERS. Why is that? Do you think hydro is important?

Dr. BERG. Yes, sir; I believe hydro is important. It's a fairly old technology and, at the present time, we have not had direct interface with industry in the matter of priorities that they may have.

Senator BUMPERS. Do you know what the potential for hydropower in this country is?

Dr. BERG. Yes, sir.

Senator BUMPERS. How much?

Dr. BERG. I can't give you the number right off my head, but I will be happy to supply it for the record.

Senator BUMPERS. You don't need to. I know those numbers. I just wanted to hear it.

First of all, about 18 percent of the total potential, according to FERC, is already taken up in wild and scenic rivers and another 12 percent is under study, that's all well and good.

But, it just seems to me that in light of the greenhouse effect that the Department of Energy ought to be more concerned about hydropower. It is just about the only renewable resource we have over a 50-year period, which is what the FERC licenses them for.

It's the cheapest power we can buy over a 50-year period. I don't understand why we're not trying to improve hydro technology, for example, or there may be generators out there that you can get twice as much power out of per gallon of water than we're getting now. But there's just no research going on.

Dr. **Berg**. Not on our side, sir. As far as we can determine, there is very little actually going on in the industry.

Senator **Bumpers**. How concerned are you personally about the greenhouse effect? Do you believe in it?

Dr. **Berg**. Yes, sir.

TRANSPORTATION FUNDING

Senator **Bumpers**. I'm really pleased to hear that, but I don't understand how when 45 percent of the greenhouse effect is coming out of the exhaust pipes of 183 million automobiles and trucks we've cut the transportation R&D budget by 45 percent.

Why is that? Is that just an arbitrary decision made by OMB Director Darman?

Dr. **Berg**. No, sir; in defense of Mr. Darman, of course, he did not help develop the budget we're talking about here. Two things I think that we must continue to stress.

We are operating on the highest priorities in our transportation area as well in the rest of our programs of concern. We're working on those where we have cost sharing with industry. We hand off the development of that research to industry and they can take it into production.

I think you will find that industry agrees with our goals. They may not agree that we're spending enough money, but they do agree with our goals. They were derived in peer review work. And as a consequence, although there could be more money spent, the money that we are spending is in those priorities that industry has identified as critical and key to the next generation of automotive engine design.

Senator **Bumpers**. Well, would you personally support a bill that tightened up the CAFE standards?

Dr. **Berg**. Right now, the Department, as you are probably aware, is looking at the response from the Department of Transportation. Until that response has been put forth, we have no comment on it.

Certainly, any increase in efficiency to get the greatest gas mileage available from our current generation of machines will have beneficial effects. That is one of the areas that we are working on. That's one of the areas that we see a 30-percent increase in efficiency.

ENERGY USE PER GNP

Senator **Bumpers**. We are always, especially in recent years, we're in this bind. We are trying to achieve energy conservation without stymieing economic growth. Yet, we use twice as many units of energy per GNP units as the Japanese.

They have about a 6 to 8 percent growth and we have a 2.5 to 3 percent growth. What are we doing wrong that they're doing right?

Dr. **Berg**. Coming from industry, I think there are several things that have occurred. I've had 25 years of industrial experience and I think much of it is due to the philosophy that our industries are operating under today.

When I finished graduate school back in 1961, the companies that you wanted to go to were those of "Better Living Through

Better Chemistry", "Research is the Key to Tomorrow." They were not just saying it. That was the philosophy from the top down.

We have seen that philosophy change considerably in this country and in the industry. They become more and more run by the CPA's. And as a consequence, they have cut down on the research and development. We have seen the large laboratories at Bell, the Sarnoff Laboratory at RCA, and other great laboratories actually being cut back.

In addition to that, one of the key disadvantages that American industry put itself into was not recognizing that quality is No. 1.

I think those are the areas where the Japanese have taken American beliefs, and put them into practice.

Senator **Bumpers**. It's very difficult around here to talk common sense about these issues because common sense dictates unpleasant choices. And, you know, this attitude that we can have it all still is pervasive in this country.

Now, when it comes—incidentally, let me go back to the statement you made in the beginning.

OVERALL FEDERAL BUDGET

Defense is supposed to get an increase for inflation. Social Security gets an inflationary increase. Roughly, 17 percent of the budget is nondefense discretionary spending. It is my understanding that there is no provision for inflation in that 17 percent of the budget.

Is that right or wrong?

Dr. **Berg**. I cannot answer. I don't know, sir. I do know that if we are to take what is being spent just in the area of defense, add that to the national debt and the entitlement programs, then we know that the spending of everything else would be over budget.

Senator **Bumpers**. I can name you seven programs that are essentially entitlements. You'd still have a deficit if you just funded those 7 and let the other 493 items in the budget go down.

Dr. **Berg**. That's correct.

Senator **Bumpers**. Don't sit around and talk about cutting. Totally eliminate the rest of Government except for Social Security, defense, Medicare, Medicaid, interest on the debt, and the two civil service and veterans pensions.

That's enough to give us the deficit before you spend a dime on education or even my salary. And I feel very protective about that now, having voted for the increase. [Laughter.]

FUNDING FOR CFC SUBSTITUTES

When I consider what I think are the real long-range problem areas for the country and the economy, this budget sure lacks a lot. Do you think we can make a 50-percent reduction in CFC's under the Montreal Protocol by 1998?

Dr. **Berg**. Yes, sir.

Senator **Bumpers**. How much money are you putting into the substitutes for CFC's?

Mr. **Streb**. We have about $500,000 for advanced refrigeration work which includes substitutes for CFC's. We have zero funds for CFC substitutes in applications for insulation.

I understand, however, that the National Bureau of Standards, which works very closely with the industry in evaluating the physical properties of the proposed new CFC's, does have three-quarters of $1 million in their request for fiscal year 1990 to continue this work.

As we discussed before, we do continue to work with the industry. There are two consortia coming together under two trade associations, which will be addressing this problem.

One, the American Refrigeration Institute, will be addressing the new CFCs, alternatives to CFCs for the refrigeration application, and another consortium predominantly addressing CFC's for the insulation work.

We are a party to these developments and would expect them to participate in some future budget.

Senator BUMPERS. Dupont has just announced that they are going to have a substitute by what—1992, 1993?

Are you familiar with what they're doing?

Dr. BERG. That was developed as a result of DOE and Dupont working together.

Senator BUMPERS. Are you satisfied that they actually have a substitute that will be available for us?

Dr. BERG. This is what I referred to at this point.

Senator BUMPERS. But at a considerably higher price.

Dr. BERG. I don't know in terms of price.

Senator BUMPERS. The stories I've read said it was going to cost more.

Dr. BERG. But we still have a ways to go as far as testing of those compounds is concerned.

Senator BUMPERS. What regulations—not you, but EPA—what regulations has EPA put out to stop the manufacturing of styrofoam in McDonald hamburger cups, for example? I thought we were going to stop production of that?

Dr. BERG. We have certain goals by which we are to cut back. It's my understanding that those are being worked out.

Senator BUMPERS. What is the goal? When are we going to eliminate production of those insulation materials?

Dr. BERG. We will not necessarily have to eliminate production.

Senator BUMPERS. But you've got to find something to take the CFC's out.

Dr. BERG. To reduce the level to the total that we're looking for, the 50-percent level.

Senator BUMPERS. What is your goal on that that you're looking to achieve?

Dr. BERG. Again, sir, we're working on the basis of a report. When the report is issued in 60 days, we'll have a better idea and we'll supply it for the record.

[The information follows:]

BUILDINGS AND COMMUNITY SYSTEMS REPORT ON INSULATION

The report entitled "Results of Workshop to Develop Alternatives for Insulations Containing CFC's Research Project Menu" was provided for the committees files.

The executive summary and abstract of the report follow.

[The information follows:]

EXECUTIVE SUMMARY

Background

A workshop was held to provide a forum for representatives of industry, academia, and government agencies to recommend research on acceptable alternatives to the currently used CFC insulations. The scope of the research discussed focused on finding alternatives for plastic foam insulation currently containing primarily CFC-11 and CFC-12. CFC-11 and CFC-12 are used as blowing agents in the production of plastic foam insulations for buildings and appliances. ORNL staff worked with representatives from private industry, academia, and government agencies to develop draft research projects prior to the June 9-10, 1988 workshop. A draft research menu and sample ballots were sent to 86 potential attendees for review a month before the workshop. Sixty nine participants representing 43 organizations attended this workshop.

Objective

The purpose of this report is to document the prioritized research project ranking produced by the Joint Public/Private Workshop on Alternatives for Insulations Containing Chlorofluorocarbons (CFCs). The major goal was to have the attendees representing all of the major insulation industries affected by CFC restrictions produce a list of research needs that is relevant, comprehensive, and prioritized. A secondary goal of the workshop was to provide the opportunity for a description of current technical activity that is occurring in both the private and public sectors. Another motive behind the workshop was to prompt cooperative public/private interactions to develop CFC alternatives, and provide guidance on the role of the federal government. In the long term it is hoped this document will help accelerate the resolution of CFC in insulation issues and minimize both the economic and the energy impact of CFC restrictions.

Approach

The methodology was to develop several draft versions of the Alternatives for Insulations Containing CFCs Research Project Menu (Appendix C), and circulate the drafts prior to holding the workshop. Each project was then discussed at the workshop and voted on by the attendees of the workshop to assign an importance ranking, and indicate who should do the research project. The balloting results were electronically compiled immediately and presented to the attendees.

Results

More than 75% of the research projects were identified as candidates for joint private/public sector research effort. The prioritized list of 29 research projects generated from all the ballot results is shown below grouped in categories of above average, average, and below average importance.

Executive Summary (cont'd)

Above average importance

C.4.1 Public/Private Research Menu
C.4.2 DOE/ORNL/Industry Workshop
C.1.12 Data Base of Physical Properties
C.1.11 Protocol to Predict Thermal Performance
C.1.4 Identify New Blowing Agents

Average importance

C.1.6 Environmentally Acceptable Blowing Agents
C.2.6 New Facing Materials
C.4.5 Energy Impact for Walls and Roofs
C.3.1 CFC Manufacturing Recovery Processes
C.1.2 Low k Standard Reference Material
C.1.3 Data Base for Alternate Blowing Agents
C.1.1 Accelerated Foam Aging for Design R-values
C.2.2 Evacuated Panel "Super Insulation"
C.2.3 Components for Super Insulations
C.1.5 Field Test Project
C.2.1 Composites with High Thermal Resistance
C.4.4 Establish Essential Material Properties
C.3.4 CFC Destruction
C.1.8 Thermal Resistance Measurements
C.4.3 Critical Assessment of Product Property Tests
C.3.2 CFC Incineration
C.3.6 CFC Adsorbents
C.3.5 CFC Recapture at Refrigerator/Freezer Retirement
C.1.10 Manufacture of Environmentally Acceptable Foams

Below average importance

C.1.9 Thermal Conductivity of Expanded Polymers
C.2.4 Non CFC Systems
C.2.5 Non CFC Foundation Insulation
C.3.3 Recycling Panels
C.1.7 Calculation Methodology - Flammability Testing

The top two items are the development of this research menu and continued workshops on alternatives for insulations containing CFCs. Other top priority research projects are development of a data base of physical properties of substitute blowing agents; protocol to predict thermal performance of foam insulation products; identify new chemical blowing agents; environmentally acceptable blowing agents and a means to achieve equivalent efficiency; new facing materials; energy impact for walls and roofs; CFC manufacturing recovery processes; and low k standard reference material. Based on the data base produced by all the ballots, the top five research projects shown in the above list have statistically above average importance and the last five have below average importance. The remainder have average importance.

Results of Workshop to Develop Alternatives for Insulations Containing CFCs Research Project Menu*

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ABSTRACT

Sixty nine individuals from 43 organizations impacted by CFC restrictions in the production of insulations met for two days to produce a relevant, comprehensive and prioritized list of research needs. Of the 29 one page research project descriptions, about 75% are candidates for joint private/public sector research ventures. Top priority research projects are: development of a data base of physical properties of substitute blowing agents; protocol to predict thermal performance of cellular foam insulation products; identify new blowing agents; environmentally acceptable blowing agents and means to achieve equivalent efficiency; new facing materials; CFC manufacturing recovery processes; and low k standard reference material. Based on the data base produced by balloting, five research projects have statistically above average importance, five have below average importance, and the remainder have average importance.

Clearly the desire is to first try to find an acceptable alternative set of blowing agents and develop protocol for predicting long term thermal performance of plastic foam insulation. There was considerable interest from the public sector attendees to develop evacuated panel insulations. There was very modest interest by the private industry participants to consider evacuated volumes in plastic foam boards. Those insulation manufacturers most impacted by CFC restrictions indicated by their balloting that they do not have as much to gain by development of alternative insulation technologies to plastic foam insulation with environmentally acceptable blowing agents.

The prioritized research list presented in this report should be considered as only one of a number of inputs for allocating research and development resources. There are many promising activities outlined in this report and this material should be useful in developing research plans and formulating research work statements. It is obvious that there are numerous areas were cooperative research ventures could be established. Hopefully this document will form a starting point in accelerating the solution to the CFC problem for insulations.

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*Research sponsored by the Office of Buildings and Community Systems, U.S. Department of Energy, under contract DE-AC05-84OR21400 with Martin Marietta Energy Systems, Inc.

APPROVAL OF GRANTS

Senator **BUMPERS**. Mr. Chairman, just one final question. The people in my State tell me that they're having a terrible time with your Dallas support office on applications for approval of energy grants being issued by the State energy office out of the States oil overcharge refund money. They can't get a hearing. They can't get a response.

We've got one project down there that I think is very meritorious. They can't even get the Dallas office to talk to them about it.

What in the hell is going on?

Dr. **BERG**. If we're talking about the one we've been trying to work out, they had asked for an appeal on it and were turned down on it. We've gone back to the State asking them to resubmit it by a different route, under our Electric Energy Storage Program.

There has been lots of communication on this one and, unfortunately, quite honestly, there was some personal involvement on both sides.

Senator **BUMPERS**. Ain't it always the case? It's always personalities.

DR. BERG'S STATUS

Dr. Berg, are you on board now? You're a recess appointment?

Dr. **BERG**. I'm a recess appointment.

Senator **BUMPERS**. Have you not been confirmed by the Senate?

Dr. **BERG**. No, sir.

Senator **BUMPERS**. It's not necessary, is it?

I will defer to our chairman, who is our Parliamentarian.

It isn't necessary, is it?

Chairman **BYRD**. No.

Senator **BUMPERS**. I don't have any other questions, Mr. Chairman.

Chairman **BYRD**. Thank you, Senator Bumpers.

Senator Domenici.

Senator **DOMENICI**. Thank you, Mr. Chairman.

DISCRETIONARY SPENDING

Let me say to Senator Bumpers with reference to the domestic discretionary appropriated accounts, which he highlights as a significant source of deficit reduction over the past 7 or 8 years, that I think there's a misunderstanding of the Bush budget in terms of an increase, or a decrease, or a freeze on those accounts. If you look at President Bush's budget submission, he has taken a number of programs that he thinks are discretionary and that he thinks should be increased, and he lists those separately to illustrate that those are increases over the previous year.

What he did not increase, he subjects to an outlay freeze. In other words, the rest of the domestic discretionary programs are subjected to an overall outlay freeze. It's my best recollection that if you put the increases with the freeze that there's something like a 3-percent overall increase for domestic discretionary spending.

I only state that, because I think you made a statement that there is no increase. I believe we have the prerogative of not increasing the programs the President would increase as we move through the appropriations process.

Senator BUMPERS. Senator, I'm not trying you on that. Let me just ask you, if I may, my staff has given me the total energy conservation budget this year, 1988, and it is $308 million—I'm sorry. In 1988, it was $308 million.

This year, 1989, it's $315 million. This budget calls for $95 million. That's a two-thirds cut.

Senator DOMENICI. That's right.

Senator BUMPERS. You're telling me that's not real?

Senator DOMENICI. No; what I'm telling you is that the Bush budget on the domestic discretionary accounts of the Federal Government did two things, one of which is significantly different than Ronald Reagan's budget.

He proposed his initiatives which would result in some programs being increased substantially. They are discretionary programs, and it is within the Appropriations Committees' prerogative to decide whether to increase those programs or not.

And then, within the remainder of the discretionary——

Senator BUMPERS. Are you talking about all discretionary accounts? Not just energy? I understand that. I'm sorry. I was making a comment just on this particular discretionary account.

Senator DOMENICI. It seems to me that while it's not an easy situation to be in, we may not choose to increase the programs proposed by the President, in which event we can add to the program you mention.

Senator BUMPERS. We can put the money over in this account.

Senator DOMENICI. Or in any that are subject to a freeze. There isn't a lot of funding to go around.

Senator BUMPERS. Senator, maybe you can also answer the question I raised a moment ago. My understanding is that there is no provision for inflation in the nondefense discretionary accounts under the Bush budget.

Senator DOMENICI. There is in his methodology of presentation. There is no automatic increase for inflation attributable to any discretionary programs. He selectively increases some, selectively decreases some, and the remainder are frozen in outlays, the sum total of which you can add to get a total for domestic discretionary spending.

Senator BUMPERS. But, when you add them all up taking the decreases and the increases, you have a flat figure from this year, do you not?

Senator DOMENICI. No; when you take all of them——

Senator BUMPERS. Nondefense discretionary?

Senator DOMENICI. When you take nondefense discretionary increases, decreases, and the outlay freeze, the sum total of that for all discretionary spending is an increase of $5.2 billion over fiscal year 1989.

Senator BUMPERS. How much?

Senator DOMENICI. It's $5.2 billion, or 3 percent overall.

Senator BUMPERS. I've been misinformed on that.

Senator DOMENICI. I think these figures show that the President's approach is different from everything being either cut or frozen. He does propose some important initiatives.

If I might proceed briefly and I thank the chairman for giving me some time on this issue.

STATE AND LOCAL ASSISTANCE PROGRAMS

With reference to energy conservation, the big ticket item essentially is, and has been for a number of years, the so-called State and local assistance grants.

This program will be $211 million out of a total of $315 million spent in fiscal year 1989. The fiscal year 1990 budget recommends that that activity be zeroed out but for administrative costs.

I wonder if in that regard, Dr. Berg, you have a summary of how much money the States received in the oil overcharge settlements, both the Exxon case and the stripper well settlement, and how much went to each State?

Dr. **Berg**. Yes, sir; we can supply that for the record.

Senator **Domenici**. I wonder, Mr. Chairman, if we might have that?

Dr. **Berg**. Absolutely.

[The information follows:]

Status of Petroleum Overcharge Funds

The States have received $3.6 billion to date from the resolution of all petroleum overcharge cases, of which $2.1 billion came from settlement of the Exxon oil overcharge case and $1 billion has been distributed under the Stripper Well Settlement Agreement.

When these funds are received, States first develop State-level allocation plans. In the case of Stripper Well funds, the States then submit proposals to DOE for review for consistency with the terms of the Settlement Agreement. In the case of Exxon funds, States submit plans for each applicable OSLAP program to DOE's field offices for approval on a yearly basis to cover each year's activities (in the same manner in which plans for use of appropriated funds are approved). To date:

States have allocated $1.95 billion in Exxon funds and $847.8 million in Stripper Well funds (90.3 percent of the total PVE funds).

States have submitted $1.2 billion in Exxon funds to DOE for approval, of which DOE has approved $1.1 billion and $102.5 million is under review.

States have submitted proposals for use of Stripper Well funds covering $851.3 million, of which DOE has found $841.8 consistent with the terms of the Settlement Agreement.

A series of tables detailing this information on a State-by-State basis follows. The first table shows the total oil overcharge funds each State has received, by source of funds. The second table shows the State level allocations of Exxon funds for each of the five eligible conservation programs. The third table is a State-by-State listing of Exxon funds under review and approved for each OSLAP grant program. The fourth table is a State-by-State listing of Stripper Well funds proposed for each eligible conservation program. The "Other" column in this table refers to energy-related programs allowed under the Settlement Agreement which fall outside the scope of the five specified Federal energy programs.

SUMMARY OF FUNDS DISTRIBUTED OR ALLOCATED TO STATES, TERRITORIES AND POSSESSIONS — DEPARTMENT OF ENERGY SCH.1 — NOVEMBER 3, 1988

	"WARNER"	ALL OTHER	MDL 378	EXXON	DIAMONDSHAMROCK	OHA 2NDSTAGE	PODRA-1987	TOTALS
STATE	AMENDMENT	(SEE SCHEDULE)	TOTAL	03/06/86	07/18/86	(SEE NOTE BELOW)		
ALABAMA	$2,966,399.98	$1,062,275.00	$15,442,899.97	$32,192,086.26	$747,244.28	$1,171,123.00	$1,463,837.00	$55,045,865.50
ALASKA	$796,599.78	$590,900.00	$3,893,914.24	$8,272,460.20	$188,409.65	$201.00	$1,166,635.00	$14,909,119.87
AMERICAN SAMOA	$34,599.91	$80,025.00	$179,238.15	$371,351.96	$8,664.93	$13.00	$157,052.00	$830,944.94
ARIZONA	$1,982,599.88	$857,200.00	$10,323,006.46	$21,565,619.62	$499,504.29	$121,711.00	$866,331.00	$36,215,972.24
ARKANSAS	$2,154,400.03	$10,735.00	$12,806,883.43	$25,949,670.45	$619,685.44	$777,389.00	$1,290,217.00	$43,608,990.36
CALIFORNIA	$18,933,799.96	$8,318,435.00	$92,127,622.94	$194,717,034.50	$4,457,833.00	$5,890,820.00	$4,664,527.00	$329,110,072.40
COLORADO	$2,065,199.88	$315,300.00	$10,820,843.78	$22,715,884.22	$523,588.00	$958,416.00	$2,730,093.00	$40,129,324.88
CONNECTICUT	$3,295,799.96	$648,408.25	$17,090,799.40	$34,900,268.97	$826,974.39	$652,704.00	$1,952,446.00	$59,367,400.96
DELAWARE	$913,799.78	$58,127.94	$4,778,026.38	$9,944,769.60	$231,192.82	$194,323.00	$581,042.00	$16,701,291.53
DIST. OF COLUMB	$466,399.97	$69,954.04	$2,404,000.09	$4,603,515.75	$116,321.59	$168,008.00	$639,805.00	$8,468,004.44
FLORIDA	$9,114,999.77	$2,738,708.75	$46,497,468.07	$98,114,523.64	$2,249,898.65	$2,182,840.00	$1,430,993.00	$162,329,431.88
GEORGIA	$4,302,800.06	$1,796,990.00	$22,410,800.78	$46,625,490.97	$1,084,399.64	$1,675,688.00	$1,717,846.00	$79,614,015.45
GUAM	$255,000.00	$3,550.00	$1,483,081.65	$3,099,681.29	$71,760.45	$44.00	$165,380.00	$5,078,497.39
HAWAII	$1,382,399.88	$923,250.00	$6,914,656.61	$14,482,089.88	$334,582.00	$266.00	$398,013.00	$24,435,257.37
IDAHO	$788,400.00	$350,575.00	$4,130,331.43	$8,690,739.43	$199,849.34	$312,157.00	$1,252,552.00	$15,724,604.20
ILLINOIS	$9,044,400.08	$44,400.00	$46,223,953.86	$96,105,505.93	$2,236,664.42	$7,861,168.00	$7,571,658.00	$169,087,750.30
INDIANA	$4,728,599.97	$20,554.18	$24,789,227.59	$51,631,387.53	$1,199,486.30	$3,443,172.00	$3,696,563.00	$89,508,990.58
IOWA	$2,467,599.84	$40,080.00	$13,112,829.02	$27,423,669.23	$634,489.45	$2,107,007.00	$2,920,865.00	$48,706,539.54
KANSAS	$2,110,600.06	$14,425.00	$11,281,662.72	$23,958,453.17	$545,885.98	$2,917,168.00	$1,595,095.00	$42,423,289.93
KENTUCKY	$2,572,800.01	$1,076,193.06	$12,900,243.48	$27,438,633.15	$624,210.92	$222,527.00	$2,475,288.00	$47,309,895.62
LOUISIANA	$5,944,199.98	$73,023.99	$23,937,622.21	$51,536,267.21	$1,158,276.56	$2,106,603.00	$1,133,773.00	$85,889,765.95
MAINE	$1,451,999.88	$370,485.30	$7,398,155.38	$15,094,373.28	$357,971.90	$213,996.00	$1,936,732.00	$26,823,713.74
MARYLAND	$3,578,000.03	$384,131.01	$18,018,989.35	$36,415,978.69	$871,889.88	$1,401,017.00	$1,957,516.00	$62,627,521.96
MASSACHUSETTS	$6,682,600.04	$1,081,424.44	$34,450,903.46	$70,340,939.14	$1,666,990.31	$1,258,970.00	$4,099,289.00	$119,581,116.39
MICHIGAN	$6,569,[illegible]	$646,828.70	$34,289,847.58	$70,991,489.94	$1,659,199.68	$5,486,947.00	$7,895,363.00	$127,539,275.86
MINNESOTA	$3,286,39[illegible].96	$40,380.00	$17,463,451.39	$36,066,224.67	$845,008.67	$2,200,948.00	$5,658,542.00	$65,560,954.68
MISSISSIPPI	$2,381,599.86	$1,195,565.00	$13,742,490.27	$28,378,643.38	$664,959.83	$910,582.00	$1,018,783.00	$48,292,623.34
MISSOURI	$3,735,599.93	$93,180.00	$19,870,532.89	$41,516,281.45	$961,487.36	$2,741,950.00	$3,334,292.00	$72,253,323.63
MONTANA	$868,599.95	$81,875.00	$4,555,051.17	$9,584,665.67	$220,400.56	$260,392.00	$1,406,103.00	$16,977,087.35
NEBRASKA	$1,378,800.08	$35,925.00	$7,421,264.67	$15,504,944.23	$359,095.61	$823,267.00	$1,618,851.00	$27,142,147.58
NEVADA	$774,199.95	$474,213.75	$4,076,385.32	$8,767,274.85	$197,239.01	$69,756.00	$594,639.00	$14,953,707.88
NEW HAMPSHIRE	$891,400.10	$32,575.00	$4,690,380.77	$9,797,563.77	$226,948.85	$96,401.00	$1,149,243.00	$16,884,512.49

SUMMARY OF FUNDS DISTRIBUTED OR ALLOCATED TO STATES, TERRITORIES AND POSSESSIONS DEPARTMENT OF ENERGY SCH.1 NOVEMBER 3, 1988

STATE	"WARNER" AMENDMENT	ALL OTHER (SEE SCHEDULE)	MDL 378 TOTAL	EXXON 03/06/86	DIAMONDSHAMROCK 07/18/86	OHA 2NDSTAGE (SEE NOTE BELOW)	PODRA-1987	TOTALS
NEW JERSEY	$7,503,399.88	$1,105,374.93	$37,150,035.45	$75,432,931.59	$1,797,597.66	$1,316,356.00	$3,824,097.00	$128,1[illegible]92.52
NEW MEXICO	$1,195,199.93	$499,000.00	$6,592,377.81	$13,692,730.49	$318,982.16	$132,736.00	$1,115,015.00	$23,546,041.39
NEW YORK	$15,379,199.86	$1,903,526.64	$77,928,420.00	$159,874,589.05	$3,770,770.88	$2,428,297.00	$12,204,329.00	$273,489,132.43
NO.MARIANA ISLS	$17,799.95	$0.00	$92,711.08	$192,061.70	$4,478.08	$7.00	$155,482.00	$462,539.81
NORTH CAROLINA	$4,315,000.06	$8,890.11	$22,587,718.56	$47,029,796.82	$1,092,960.29	$1,510,151.00	$2,346,235.00	$78,890,752.84
NORTH DAKOTA	$698,199.88	$0.00	$3,688,661.55	$7,721,443.24	$178,475.44	$813,129.00	$1,484,245.00	$14,584,154.11
OHIO	$7,124,199.89	$4,569,837.17	$37,816,270.65	$79,740,285.12	$1,829,835.27	$1,394,174.00	$7,014,599.00	$139,489,201.10
OKLAHOMA	$2,367,599.86	$0.00	$12,429,355.70	$26,234,258.14	$601,420.23	$1,835,287.00	$1,527,895.00	$44,995,815.93
OREGON	$1,964,199.88	$1,061,375.00	$9,975,613.62	$20,721,692.22	$482,689.24	$397,096.00	$1,761,424.00	$36,364,089.96
PENNSYLVANIA	$9,175,403.07	$1,658,786.94	$46,857,257.52	$96,803,642.42	$2,267,308.05	$3,418,752.00	$7,939,798.00	$168,120,948.00
PUERTO RICO	$2,025,400.00	$5,995,257.00	$9,587,257.19	$20,053,948.64	$463,903.05	$9,510.00	$472,970.00	$38,608,245.88
RHODE ISLAND	$767,199.95	$72,675.14	$3,990,138.39	$8,005,286.31	$193,063.21	$265,033.00	$931,252.00	$14,224,648.01
SOUTH CAROLINA	$2,339,199.86	$60,900.00	$11,997,963.36	$25,187,596.62	$580,551.64	$791,135.00	$1,114,017.00	$42,071,363.48
SOUTH DAKOTA	$668,800.12	$175.00	$3,598,403.89	$7,501,993.25	$174,110.57	$574,339.00	$1,333,568.00	$13,851,389.84
TENNESSEE	$3,174,599.82	$164,645.00	$16,283,467.23	$34,603,233.87	$787,911.92	$1,380,254.00	$2,393,005.00	$58,797,116.83
TEXAS	$17,091,199.91	$787,026.98	$74,246,353.66	$157,187,086.87	$3,592,604.07	$6,187,825.00	$3,133,845.00	$262,225,941.50
TRUST TERRITOR.	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$79,600.00	$79,600.00
UTAH	$1,124,199.93	$420,025.00	$5,937,114.46	$12,454,477.95	$287,272.96	$696,455.00	$1,295,100.00	$22,214,645.30
VERMONT	$457,999.97	$16,093.52	$2,408,636.85	$5,005,193.65	$116,540.46	$73,443.00	$960,075.00	$9,037,982.45
VIRGIN ISLANDS	$1,193,000.00	$0.00	$4,655,338.04	$9,951,205.30	$225,258.71	$93.00	$166,416.00	$16,191,311.05
VIRGINIA	$5,080,600.01	$306,094.06	$25,828,145.80	$53,376,861.04	$1,249,754.69	$1,662,583.00	$2,464,176.00	$89,968,214.60
WASHINGTON	$3,118,999.82	$1,423,352.50	$15,368,578.34	$32,121,634.15	$743,642.53	$613,089.00	$2,630,147.00	$56,019,443.34
WEST VIRGINIA	$1,169,999.93	$43,333.10	$6,014,553.97	$12,902,924.70	$291,025.58	$410,018.00	$1,728,651.00	$22,560,506.28
WISCONSIN	$3,344,399.96	$9,720.00	$17,706,956.08	$36,966,568.55	$856,791.30	$1,916,919.00	$4,696,809.00	$65,499,153.90
WYOMING	$783,999.95	$110,059.00	$4,103,867.26	$8,974,395.60	$198,568.80	$292,188.00	$753,729.00	$15,106,788.61
TOTALS	$200,000,000.00	$43,745,831.50	$1,006,371,760.98	$2,098,433,309.32	$48,695,630.57	$76,336,443.00	$134,065,844.00	$3,607,648,819.37

NOTE: DISBURSEMENT OF OHA SECOND STAGE REFUNDS MAY BE [illegible] APPROVAL OF STATE PLAN.

SUMMARY OF FUNDS DISTRIBUTED TO ALL JURISDICTIONS IN MDL 378 Dept. of Energy-- Schedule 2 November 3,1988

		INITIAL MDL	INITIAL OHA	1ST INCREMENTAL	SECOND OHA	[illegible] SET ASIDE	3RD INCREMENTAL	THIRD OHA	4[illegible] [illegible]MENTAL	[illegible] OHA	FIFTH OHA	5th INCREMENTAL	TOTAL
	ALLOCATION	ESCROW 8/7/86(1)	8/7/86 (2)	MDL 11/28/86 (1)	4/23/87 (2)	6/30/87 (1)	7/30/87 (1)	10-16-87 (2)	1[illegible]-87 (1)	02-25-88(2)	04-07-88	11-03-88(1)	DISTRIBUTION
STATE	RATIO	$675,990,627.80	$51,080,133.31	$27,759,720.28	$79,321,176.65	$19,404,564.94	$7,421,962.65	$12,260,000.00	$9,257,433.34	$41,737,000.00	$69,200,000.00	$12,939,142.02	TO STATES
ALABAMA	0.01534512450	$10,373,160.34	$783,831.01	$425,976.36	$1,217,193.33	$297,765.46	$113,990.94	$188,131.23	$142,056.47	$640,459.46	$1,061,882.62	$198,552.75	$15,442,899.97
ALASKA	0.00386926023	$2,615,583.65	$197,642.33	$107,409.58	$306,914.28	$75,081.31	$28,717.50	$47,437.13	$35,819.42	$161,491.31	$267,752.81	$50,064.91	$3,893,914.24
AMERICAN SAMOA	0.00017810331	$120,396.17	$9,097.54	$4,944.10	$14,127.37	$3,456.02	$1,321.88	$2,183.55	$1,648.78	$7,433.50	$12,324.75	$2,304.50	$179,238.15
ARIZONA	0.01025764719	$6,934,073.36	$523,961.99	$284,749.42	$813,648.64	$199,045.18	$76,131.87	$125,758.75	$94,959.49	$428,123.42	$709,829.18	$132,725.15	$10,323,006.46
ARKANSAS	0.01272579770	$8,602,519.97	$650,035.44	$353,264.58	$1,009,425.25	$246,938.57	$94,450.40	$156,018.28	$117,808.22	$531,136.62	$880,625.20	$164,660.90	$12,806,803.43
CALIFORNIA	0.09154432453	$61,883,105.41	$4,676,096.30	$2,541,244.84	$7,261,403.50	$1,776,377.79	$679,438.56	$1,122,333.42	$847,465.48	$3,820,785.41	$6,334,867.22	$1,184,505.02	$92,127,622.94
COLORADO	0.01075233249	$7,268,475.99	$549,230.58	$298,481.74	$852,887.66	$208,644.33	$79,803.41	$131,823.60	$99,539.00	$448,770.10	$744,061.41	$139,125.96	$10,820,843.78
CONNECTICUT	0.01698259040	$11,480,071.95	$867,472.98	$471,431.96	$1,347,079.05	$329,539.78	$126,044.15	$208,206.56	$157,215.20	$708,802.38	$1,175,195.25	$219,740.15	$17,090,799.40
DELAWARE	0.00474777469	$3,209,451.19	$242,516.96	$131,796.90	$376,599.07	$92,128.50	$35,237.81	$58,207.72	$43,952.21	$198,157.87	$328,546.01	$61,432.13	$4,778,026.38
DIS OF COLUMBIA	0.00238877935	$1,614,792.45	$122,019.17	$66,311.85	$189,480.79	$46,353.22	$17,729.43	$29,286.43	$22,113.97	$99,700.49	$165,303.53	$30,908.76	$2,404,000.09
FLORIDA	0.04620307312	$31,232,844.41	$2,360,059.13	$1,282,584.39	$3,664,882.12	$896,550.53	$342,917.48	$566,449.68	$427,721.87	$1,928,377.66	$3,197,252.66	$597,828.12	$46,497,468.07
GEORGIA	0.02226890861	$15,053,573.51	$1,137,498.82	$618,178.67	$1,766,396.04	$432,118.48	$165,279.01	$273,016.82	$206,152.94	$929,437.44	$1,541,008.48	$288,140.57	$22,410,800.78
GUAM	0.00147369165	$996,201.74	$75,276.37	$40,909.27	$116,894.95	$28,596.35	$10,937.68	$18,067.46	$13,642.60	$61,507.47	$101,979.46	$19,068.31	$1,483,081.65
HAWAII	0.00687087703	$4,644,648.47	$350,965.31	$190,733.62	$545,006.05	$133,326.38	$50,995.39	$84,236.95	$63,606.69	$286,769.80	$475,464.69	$88,903.25	$6,914,656.61
IDAHO	0.00410418057	$2,774,387.60	$209,642.09	$113,930.90	$325,548.43	$79,639.84	$30,461.07	$50,317.25	$37,994.18	$171,296.19	$284,009.30	$53,104.58	$4,130,331.43
ILLINOIS	0.04593129055	$31,049,122.00	$2,346,176.45	$1,275,039.78	$3,643,324.02	$891,276.71	$340,900.32	$563,117.62	$425,205.86	$1,917,034.28	$3,178,445.31	$594,311.49	$46,223,953.86
INDIANA	0.0246322[illegible]0	$16,651,188.12	$1,258,219.97	$683,785.11	$1,953,861.17	$477,978.61	$182,819.84	$301,991.71	$228,031.66	$1,028,077.33	$1,704,553.54	$318,720.53	$24,789,227.59
IOWA	0.01302980621	$8,808,026.88	$665,564.24	$361,703.78	$1,033,539.56	$252,837.72	$96,706.74	$159,745.42	$120,622.56	$543,825.02	$901,662.59	$168,594.51	$13,112,829.02
KANSAS	0.01121023378	$7,578,012.97	$572,620.24	$311,192.95	$889,208.94	$217,529.71	$83,201.94	$137,437.47	$103,777.99	$467,881.53	$775,748.18	$145,050.81	$11,281,662.72
KENTUCKY	0.01281856663	$8,665,230.90	$654,774.09	$355,839.82	$1,016,783.79	$248,738.71	$95,138.92	$157,155.63	$118,667.03	$535,008.51	$887,044.82	$165,861.25	$12,900,243.48
LOUISIANA	0.02378606310	$16,079,155.73	$1,214,995.27	$660,294.46	$1,886,738.52	$461,558.21	$176,539.27	$291,617.13	$220,197.89	$992,758.92	$1,645,995.56	$307,771.25	$23,937,622.21
MAINE	0.00735131456	$4,969,419.74	$375,506.13	$204,070.44	$583,114.92	$142,649.06	$54,561.18	$90,127.12	$68,054.30	$306,821.82	$508,710.97	$95,119.70	$7,398,155.38
MARYLAND	0.01790490359	$12,103,547.02	$914,584.86	$497,035.12	$1,420,238.02	$347,436.86	$132,889.53	$219,514.12	$165,753.45	$747,296.96	$1,239,019.32	$231,674.09	$18,018,989.35
MASSACHUSETTS	0.03423278036	$23,141,038.69	$1,748,614.98	$950,292.41	$2,715,384.42	$664,272.21	$254,074.42	$419,693.89	$316,907.68	$1,428,773.56	$2,368,908.40	$442,942.81	$34,450,903.46
MICHIGAN	0.03407274419	$23,032,855.74	$1,740,440.32	$945,849.85	$2,702,690.16	$661,166.78	$252,886.63	$417,731.84	$315,426.16	$1,422,094.13	$2,357,833.90	$440,872.08	$34,289,847.58
MINNESOTA	0.01735288297	$11,730,386.25	$886,397.58	$481,711.18	$1,376,451.10	$336,725.14	$128,792.45	$212,746.35	$160,643.16	$724,257.28	$1,200,819.50	$224,531.42	$17,463,451.39
MISSISSIPPI	0.01365548081	$9,230,977.05	$697,523.78	$379,072.33	$1,083,158.81	$264,978.66	$101,350.47	$167,416.19	$126,414.70	$569,938.80	$944,959.27	$176,690.21	$13,742,490.27
MISSOURI	0.01974472423	$13,347,248.53	$1,008,563.15	$548,108.02	$1,566,174.76	$383,137.78	$146,544.61	$242,070.32	$182,785.47	$824,085.55	$1,366,334.92	$255,479.79	$19,870,532.89
MONTANA	0.00452621123	$3,059,676.37	$231,199.47	$125,646.36	$359,024.40	$87,829.16	$33,593.37	$55,491.35	$41,901.10	$188,910.48	$313,213.82	$58,565.29	$4,555,051.17
NEBRASKA	0.00737427752	$4,984,942.49	$376,679.08	$204,707.88	$584,936.37	$143,094.65	$54,731.61	$90,408.64	$68,266.88	$307,780.23	$510,300.01	$95,416.82	$7,421,266.67
NEVADA	0.00405057600	$2,738,151.42	$206,903.96	$112,442.86	$321,296.46	$78,599.67	$30,063.22	$49,660.06	$37,497.94	$169,058.89	$280,299.86	$52,410.98	$4,076,385.32
NEW HAMPSHIRE	0.00466068401	$3,150,578.71	$238,068.36	$129,379.28	$369,690.94	$90,438.55	$34,591.42	$57,139.99	$43,145.97	$194,522.97	$322,519.33	$60,305.25	$4,690,380.77
NEW JERSEY	0.03691482302	$24,954,074.39	$1,885,614.08	$1,024,745.16	$2,928,127.20	$716,316.08	$273,980.44	$452,575.73	$341,736.51	$1,540,713.97	$2,554,505.75	$477,646.14	$37,150,035.45
NEW MEXICO	0.00655063871	$4,428,170.37	$334,607.50	$181,843.90	$519,604.37	$127,112.29	$48,618.60	$80,310.83	$60,642.10	$273,404.00	$453,304.20	$84,759.64	$6,592,377.81
NEW YORK	0.07743502253	$52,345,349.50	$3,955,391.27	$2,149,574.57	$6,142,237.10	$1,502,592.92	$574,719.85	$949,353.38	$716,849.56	$3,231,905.54	$5,358,503.56	$1,001,942.75	$77,928,420.00
NO. MARIANA ISL	0.00009212409	$62,275.02	$4,705.71	$2,557.34	$7,307.39	$1,787.63	$683.74	$1,129.44	$852.83	$3,844.98	$6,374.99	$1,192.01	$92,711.08
NORTH CAROLINA	0.02244470625	$15,172,411.07	$1,146,478.59	$623,058.77	$1,780,340.51	$435,529.76	$166,583.77	$275,172.10	$207,780.37	$936,774.70	$1,553,173.68	$290,415.24	$22,587,718.56
NORTH DAKOTA	0.00366530709	$2,477,713.24	$187,224.37	$101,747.90	$290,736.47	$71,123.69	$27,203.77	$44,936.66	$33,931.34	$152,978.92	$253,639.25	$47,425.93	$3,688,661.55
OHIO	0.03757684000	$25,401,591.66	$1,919,430.00	$1,043,122.57	$2,980,639.17	$729,162.23	$278,893.90	$460,692.06	$347,[illegible]5.09	$1,568,344.57	$2,600,317.33	$486,212.07	$37,816,270.65
OKLAHOMA	0.01235066023	$8,348,930.56	$630,873.37	$342,850.87	$979,668.91	$239,659.19	$91,665.14	$151,419.09	$114,[illegible]	$515,479.51	$854,665.69	$159,806.95	$12,429,355.70
OREGON	0.00991245384	$6,700,725.89	$506,329.46	$275,166.95	$786,267.50	$192,346.85	$73,569.86	$121,526.68	$91,7[illegible]	$413,716.08	$685,941.81	$128,258.65	$9,975,613.62
PENNSYLVANIA	0.04656058461	$31,474,518.82	$2,378,320.87	$1,292,508.80	$3,693,240.35	$903,487.89	$345,570.92	$570,832.77	$431,031.51	$1,943,299.12	$3,221,992.46	$602,454.02	$46,857,257.52
PUERTO RICO	0.00952655624	$6,439,862.74	$486,617.76	$264,454.54	$755,657.65	$184,858.68	$70,705.74	$116,795.58	$88,191.46	$397,609.88	$659,237.69	$123,265.46	$9,587,257.19

SUMMARY OF FUNDS DISTRIBUTED TO ALL JURISDICTIONS IN MDL 378 Dept. of Energy-- Schedule 2 November 3,1988

STATE	ALLOCATION RATIO	INITIAL MDL ESCROW 8/7/86(1) $675,990,627.90	INITIAL OHA 3/7/86 (2) $51,080,133.31	1ST INCREMENTAL MDL 11/29/86 (1) $27,759,720.28	SECOND OHA 6/23/87 (2) $79,321,176.65	[illegible] SET ASIDE 6/30/87 (1) $19,404,564.94	3RD INCREMENTAL 7/30/97 (1) $7,421,962.65	THIRD OHA 11-16-87 (2) $12,260,000.00	[illegible]ENTAL [illegible]-87 (1) $9,257,433.34	[illegible] OHA 02-25-88(2) $41,737,000.00	FIFTH OHA 04-07-88 $69,200,000.00	5th INCREMENTAL 11-03-88(1) $12,939,142.02	TOTAL DISTRIBUTION TO STATES
RHODE ISLAND	0.00396487514	$2,680,218.44	$202,526.35	$110,063.82	$314,498.57	$76,936.68	$29,427.16	$48,609.37	$36,704.57	$165,482.00	$274,369.34	$51,302.08	$3,990,130.39
SOUTH CAROLINA	0.01192199923	$8,059,159.74	$608,977.31	$330,951.36	$945,667.00	$231,341.21	$88,484.63	$146,163.71	$110,367.11	$497,588.49	$825,002.35	$154,260.44	$11,997,963.36
SOUTH DAKOTA	0.00357562087	$2,417,084.20	$182,643.19	$99,258.24	$283,622.46	$69,383.37	$26,538.12	$43,837.11	$33,101.07	$149,235.69	$247,432.97	$46,265.67	$3,598,403.89
TENNESSEE	0.01610036977	$10,937,778.32	$826,495.44	$449,162.56	$1,283,445.97	$313,973.04	$120,090.10	$198,371.33	$149,788.69	$675,320.10	$1,119,681.59	$209,360.10	$16,283,467.23
TEXAS	0.07377626891	$49,872,066.34	$3,768,501.65	$2,048,008.59	$5,852,020.46	$1,431,596.40	$547,564.71	$904,497.06	$682,978.89	$3,079,200.14	$5,105,317.81	$954,601.62	$74,246,353.66
UTAH	0.00589952410	$3,988,023.00	$301,348.48	$163,769.14	$467,957.19	$114,477.70	$43,786.05	$72,328.17	$54,614.45	$246,228.44	$408,247.07	$76,334.78	$5,937,114.46
VERMONT	0.00239338678	$1,617,907.03	$122,254.52	$66,439.75	$189,846.25	$46,442.63	$17,763.63	$29,342.92	$22,156.62	$99,892.78	$165,622.34	$30,968.37	$2,408,636.85
VIRGIN ISLANDS	0.00462584316	$3,127,040.14	$236,289.71	$128,412.67	$366,928.90	$89,762.86	$34,332.98	$56,713.08	$42,823.62	$193,069.65	$320,109.73	$59,854.70	$4,655,338.04
VIRGINIA	0.02566461699	$17,349,040.55	$1,310,952.06	$712,442.59	$2,035,747.62	$498,010.73	$190,481.83	$314,648.20	$237,588.48	$1,071,164.12	$1,775,991.50	$332,078.12	$25,828,145.00
WASHINGTON	0.0152716[illegible]	$10,323,237.72	$780,058.68	$423,926.28	$1,211,335.39	$296,332.42	$113,342.82	$187,225.91	$141,372.80	$637,377.14	$1,056,772.12	$197,597.18	$15,368,578.34
WEST VIRGINIA	0.00597664733	$4,040,039.94	$305,279.05	$165,905.23	$474,060.90	$115,970.86	$44,357.16	$73,271.56	$55,326.80	$249,440.07	$413,571.[illegible]	$77,330.44	$6,014,553.97
WISCONSIN	0.01759484593	$11,893,950.95	$898,747.08	$488,428.00	$1,395,643.88	$341,420.33	$130,588.29	$215,712.81	$162,883.11	$734,356.08	$1,217,563.34	$227,662.21	$17,706,956.08
WYOMING	0.00407788395	$2,756,611.33	$208,298.86	$113,200.92	$323,462.55	$79,129.56	$30,265.90	$49,994.86	$37,750.74	$170,190.65	$282,189.57	$52,764.32	$4,103,867.26
TOTALS	1.00000000000	$675,990,627.80	$51,080,133.31	$27,759,720.28	$79,321,176.68	$19,404,564.94	$7,421,962.65	$12,260,000.00	$9,257,433.34	$41,737,000.00	$69,200,000.00	$12,939,142.02	$1,006,371,760.98

SUMMARY OF FUNDS DISTRIBUTED OR ALLOCATED TO STATES, TERRITORIES AND POSSESSIONS-ALL OTHER DEPARTMENT OF ENERGY SCHEDULE 3 NOVEMBER 3, 1988

	CORCO	CHEVRON	SOHIO	MACMILLAN	TIME	U.S.A.	IMPERIAL	SITE/FLASH	WORLD	
STATE	01/08/81	10/26/81	11/02/82	11/04/82	01/04/83	11/04/82	11/24/82	02/07/83	03/25/83	TOTAL
ALABAMA	$0.00	$1,051,175.00	$0.00	$0.00	$0.00	$0.00	$11,100.00	$0.00	$0.00	$1,062,275.00
ALASKA	$0.00	$590,900.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$590,900.00
AMERICAN SAMOA	$0.00	$80,025.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$80,025.00
ARIZONA	$0.00	$857,200.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$857,200.00
ARKANSAS	$0.00	$175.00	$0.00	$171,540.00	$0.00	$0.00	$10,560.00	$0.00	$0.00	$10,735.00
CALIFORNIA	$0.00	$6,642,275.00	$0.00	$828,739.00	$258,491.00	$776,160.00	$0.00	$0.00	$900,000.00	$8,318,435.00
COLORADO	$0.00	$306,300.00	$0.00	$0.00	$0.00	$0.00	$0.00	$9,000.00	$0.00	$315,300.00
CONNECTICUT	$0.00	$503,700.00	$144 708.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$648,408.25
DELAWARE	$0.00	$22,175.00	$35,952.94	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$58,127.94
DIS OF COLUMBIA	$0.00	$36,400.00	$33,554.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$69,954.04
FLORIDA	$0.00	$2,473,450.00	$0.00	$0.00	$0.00	$64,198.75	$196,560.00	$4,500.00	$0.00	$2,738,708.75
GEORGIA	$0.00	$1,778,450.00	$0.00	$0.00	$0.00	$0.00	$18,540.00	$0.00	$0.00	$1,796,990.00
GUAM	$0.00	$3,550.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$3,550.00
HAWAII	$0.00	$923,250.00	$0.00	$0.00	$10,523.00	$0.00	$0.00	$0.00	$0.00	$923,250.00
IDAHO	$0.00	$350,575.00	$0.00	$0.00	$18,716.00	$0.00	$0.00	$0.00	$0.00	$350,575.00
ILLINOIS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$39,900.00	$4,500.00	$0.00	$44,400.00
INDIANA	$0.00	$12,975.00	$4,159.18	$0.00	$0.00	$0.00	$3,420.00	$0.00	$0.00	$20,554.18
IOWA	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$31,080.00	$9,000.00	$0.00	$40,080.00
KANSAS	$0.00	$1,525.00	$0.00	$0.00	$0.00	$0.00	$3,900.00	$9,000.00	$0.00	$14,425.00
KENTUCKY	$0.00	$1,063,450.00	$4,583.06	$0.00	$0.00	$0.00	$8,160.00	$0.00	$0.00	$1,076,193.06
LOUISIANA	$0.00	$43,375.00	$7,088.99	$0.00	$0.00	$0.00	$60.00	$22,500.00	$0.00	$73,023.99
MAINE	$0.00	$166,425.00	$204,060.30	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$370,485.30
MARYLAND	$0.00	$52,225.00	$331,906.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$384,131.01
MASSACHUSETTS	$0.00	$341,100.00	$740,324.44	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,081,424.44
MICHIGAN	$0.00	$4,550.00	$642,278.70	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$646,828.70
MINNESOTA	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$40,380.00	$0.00	$0.00	$40,380.00
MISSISSIPPI	$0.00	$807,725.00	$0.00	$0.00	$0.00	$0.00	$9,840.00	$378,000.00	$0.00	$1,195,565.00
MISSOURI	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$93,180.00	$0.00	$0.00	$93,180.00
MONTANA	$0.00	$81,875.00	$0.00	$0.00	$9,315.00	$0.00	$0.00	$0.00	$0.00	$81,875.00
NEBRASKA	$0.00	$28,425.00	$0.00	$0.00	$0.00	$0.00	$7,500.00	$0.00	$0.00	$35,925.00
NEVADA	$0.00	$425,800.00	$0.00	$0.00	$28,118.00	$48,413.75	$0.00	$0.00	$0.00	$474,213.75
NEW HAMPSHIRE	$0.00	$32,575.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$32,575.00
NEW JERSEY	$0.00	$709,475.00	$395,899.93	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,105,374.93

SUMMARY OF FUNDS DISTRIBUTED OR ALLOCATED TO STATES, TERRITORIES AND POSSESSIONS-ALL OTHER DEPARTMENT OF ENERGY SCHEDULE 3 NOVEMBER 3, 1988

STATE	CORCO 01/08/81	CHEVRON 10/26/81	SOHIO 11/02/82	MACMILLAN 11/04/82	TIME 01/04/83	U.S.A. 11/04/82	IMPERIAL 11/24/82	SITE/FLASH 02/07/83	WORLD 03/25/83	TOTAL
NEW MEXICO	$0.00	$499,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$499,000.00
NEW YORK	$0.00	$881,675.00	$1,021,851.64	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,903,526.64
NO. MARIANA ISL	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
NORTH CAROLINA	$0.00	$150.00	$8,740.11	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$8,890.11
NORTH DAKOTA	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
OHIO	$0.00	$33,525.00	$4,427,832.17	$0.00	$0.00	$0.00	$108,480.00	$0.00	$0.00	$4,569,837.17
OKLAHOMA	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
OREGON	$0.00	$1,061,375.00	$0.00	$0.00	$115,143.00	$0.00	$0.00	$0.00	$0.00	$1,061,375.00
PENNSYLVANIA	$0.00	$242,100.00	$1,416,686.94	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,658,786.94
PUERTO RICO	$5,833,332.00	$161,925.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$5,995,257.00
RHODE ISLAND	$0.00	$0.00	$72,675.14	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$72,675.14
SOUTH CAROLINA	$0.00	$60,900.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$60,900.00
SOUTH DAKOTA	$0.00	$175.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$175.00
TENNESSEE	$0.00	$157,025.00	$0.00	$0.00	$0.00	$0.00	$7,620.00	$0.00	$0.00	$164,645.00
TEXAS	$0.00	$617,275.00	$156,251.98	$0.00	$0.00	$0.00	$0.00	$13,500.00	$0.00	$787,026.98
UTAH	$0.00	$420,025.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$420,025.00
VERMONT	$0.00	$10,300.00	$5,793.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$16,093.52
VIRGIN ISLANDS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
VIRGINIA	$0.00	$1,725.00	$304,369.06	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$306,094.06
WASHINGTON	$0.00	$1,349,625.00	$0.00	$0.00	$422,194.00	$73,727.50	$0.00	$0.00	$0.00	$1,423,352.50
WEST VIRGINIA	$0.00	$2,050.00	$41,283.10	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$43,333.10
WISCONSIN	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$9,720.00	$0.00	$0.00	$9,720.00
WYOMING	$0.00	$110,050.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$110,050.00
TOTALS	$5,833,332.00	$25,000,000.00	$9,999,999.50	$1,000,279.00	$862,500.00	$962,500.00	$600,000.00	$450,000.00	$900,000.00	$43,745,831.50

3/1/89

STATE-LEVEL ALLOCATIONS OF EXXON OIL OVERCHARGE FUNDS

STATE	EXXON DISBURSEMENT	SECP ALLOCATED	EES ALLOCATED*	ICP ALLOCATED	WAP ALLOCATED	LIHEAP ALLOCATED	TOTAL ALLOCATED
ALABAMA	$32,192,086	$6,755,000	$3,250,000	$12,138,197	$5,852,338	$5,509,465	$33,505,000
ALASKA	$8,272,460	$2,418,289	$1,333,484	$900,000	$6,300,000	$0	$10,951,773
AMERICAN SAMOA	$371,276	$393,947	$0	$0	$0		$393,947
ARIZONA	$21,565,620	$15,881,132	$1,025,000	$1,500,000	$4,000,000	$1,500,000	$23,886,132
ARKANSAS	$25,949,870	$3,130,501	$6,440	$18,850,000	$2,500,000	$3,700,000	$28,186,941
CALIFORNIA	$194,717,035	$69,758,989	$14,000,000	$0	$30,000,000	$10,000,000	$123,758,989
COLORADO	$22,715,884	$20,615,540	$0	$0	$5,554,476		$26,170,016
CONNECTICUT	$34,900,289	$6,400,000	$0	$1,000,000	$0	$27,500,289	$34,900,289
DELAWARE	$9,944,770	$103,548	$889,756	$4,483,334	$2,000,000	$96,827	$7,573,465
DISTRICT OF COLUMBIA	$4,603,516	$1,231,000	$0	$400,000	$1,042,857	$1,068,587	$3,742,444
FLORIDA	$98,114,524	$18,059,000	$2,003,000	$66,000,000	$302,300		$86,364,300
GEORGIA	$46,625,491	$1,505,000	$2,425,000	$16,000,000	$11,998,000	$21,000,000	$52,928,000
GUAM	$3,099,681	$305,214	$0	$0	$0		$305,214
HAWAII	$14,482,090	$8,446,772	$1,513,028	$4,250,000	$1,600,000		$15,809,800
IDAHO	$8,690,739	$3,925,280	$0	$1,000,000	$3,334,514	$0	$8,259,794
ILLINOIS	$96,105,506	$12,585,133	$0	$0	$62,550,000	$40,000,000	$115,135,133
INDIANA	$51,631,368	$19,087,805	$0	$412,212	$13,671,839	$19,672,845	$52,844,701
IOWA	$27,423,669	$10,975,000	$5,353,134	$0	$4,769,395	$0	$21,097,529
KANSAS	$23,958,453	$5,587,444	$292,617	$9,574,809	$3,191,768	$10,836,459	$29,483,097
KENTUCKY	$27,438,633	$0	$0	$0	$5,249,000	$2,587,345	$7,836,345
LOUISIANA	$51,536,267	$4,119,230	$0	$30,000,000	$21,536,267	$0	$55,655,497
MAINE	$15,094,373	$7,725,000	$0	$1,000,000	$7,600,000	$200,000	$16,525,000
MARYLAND	$36,415,979	$3,000,000	$0	$3,349,305	$30,000,000	$4,300,000	$40,649,305
MASSACHUSETTS	$70,340,939	$21,700,000	$0	$0	$52,000,000	$0	$73,700,000
MICHIGAN	$70,991,490	$18,683,000	$0	$0	$15,966,200	$46,028,000	$80,677,200
MINNESOTA	$36,066,225	$18,298,589	$1,268,038	$0	$9,500,000	$5,500,000	$34,566,627
MISSISSIPPI	$28,378,643	$10,711,000	$1,126,000	$11,092,000	$5,700,000	$2,000,030	$30,629,030
MISSOURI	$41,516,281	$8,870,166	$550,773	$10,952,887	$14,332,528	$3,100,000	$37,806,354
MONTANA	$9,584,666	$2,905,439	$235,000	$938,957	$4,866,000	$1,650,000	$10,595,396
NEBRASKA	$15,504,944	$3,328,556	$3,309,795	$0	$0	$0	$6,638,351
NEVADA	$8,767,275	$1,416,595	$1,839,018	$215,077	$3,432,842	$4,999,695	$11,903,227
NEW HAMPSHIRE	$9,797,537	$4,438,000	$3,628,986	$79,088	$893,400	$0	$9,039,474
NEW JERSEY	$75,432,932	$4,000,000	$0	$18,972,706	$0	$0	$22,972,706
NEW MEXICO	$13,692,730	$4,998,500	$0	$4,268,922	$5,337,525	$0	$14,604,947
NEW YORK	$159,874,589	$72,569,092	$12,495,399	$38,000,000	$37,455,127	$17,500,000	$178,019,618
NORTHERN MARIANAS	$192,062	$199,670	$0	$0	$0	$0	$199,670
NORTH CAROLINA	$47,029,797	$5,850,000	$1,460,000	$2,500,000	$7,400,000	$3,640,000	$20,850,000
NORTH DAKOTA	$7,721,443	$1,449,536	$128,017	$2,718,000	$1,364,447	$2,800,000	$8,460,000
OHIO	$79,740,285	$5,390,706	$1,869,389	$3,114,486	$51,101,669	$10,000,000	$71,476,250
OKLAHOMA	$26,234,258	$13,373,930	$0	$4,000,000	$5,305,776	$5,037,708	$27,717,414
OREGON	$20,721,692	$6,525,827	$311,900	$103,654	$14,446,512	$238,418	$21,626,311
PENNSYLVANIA	$96,803,642	$5,918,000	$800,000	$5,760,627	$19,082,000	$62,066,000	$93,626,627
PUERTO RICO	$20,053,949	$150,000	$0	$1,850,000	$0	$20,000,000	$22,000,000
RHODE ISLAND	$8,005,286	$3,515,000	$400,000	$1,500,000	$1,340,000	$1,250,000	$8,005,000
SOUTH CAROLINA	$25,187,597	$7,484,000	$6,364,000	$8,344,000	$8,400,000	$4,000,000	$34,592,000
SOUTH DAKOTA	$7,501,993	$8,700,047	$232,000	$1,000,000	$1,000,000	$1,614,707	$12,546,754
TENNESSEE	$34,603,234	$3,076,000	$4,500,000	$10,000,000	$22,500,000	$2,000,000	$42,076,000
TEXAS	$157,187,087	$112,820,000	$6,000,000	$8,000,000	$7,000,000	$4,000,000	$137,820,000
UTAH	$12,454,478	$7,100,000	$0	$2,250,000	$7,000,000	$0	$16,350,000
VERMONT	$5,005,194	$2,300,000	$0	$0	$2,558,000	$365,000	$5,223,000
VIRGIN ISLANDS	$9,951,205	$547,088	$0	$0	$0	$0	$547,088
VIRGINIA	$53,376,861	$6,187,644	$539,813	$1,835,835	$15,500,000	$6,150,000	$30,213,292
WASHINGTON	$32,121,634	$17,376,075	$0	$0	$15,192,831	$1,335,237	$33,904,143
WEST VIRGINIA	$12,902,925	$2,543,260	$0	$471,499	$3,537,668	$5,000,000	$11,552,427
WISCONSIN	$36,966,569	$0	$0	$0	$17,700,000	$23,377,517	$41,077,517
WYOMING	$8,874,386	$5,000,000	$0	$2,000,000	$2,000,000	$0	$9,000,000
TOTAL	$2,098,433,207	$609,414,544	$79,149,587	$310,825,595	$574,965,279	$381,624,109	$1,955,979,114

*In some cases, States report EES allocations in combination with SECP.

PROPOSALS FOR USE OF STRIPPER WELL
OVERCHARGE FUNDS BY STATE AND PROGRAM
AS OF 02/10/89

STATE	TOTAL DISTRIBUTED TO STATES	EES	ICP	SECP	WAP	LIHEAP	OTHER	PROGRAMMATIC TOTAL
ALASKA	3,883,914.24	0	0	0	0	0	0	0
ALABAMA	15,442,899.97	627,900	394,296	96,600	0	2,270,000	11,430,000	14,818,796
ARKANSAS	12,806,883.43	0	0	0	2,926,858	1,380,000	6,422,733	10,729,591
AMERICAN SAMOA	179,238.15	0	0	0	0	0	0	0
ARIZONA	10,323,006.46	0	0	90,000	0	75,000	3,353,000	3,518,000
CALIFORNIA	92,127,622.94	1,000,000	0	0	0	0	79,554,700	80,554,700
COLORADO	10,820,843.78	0	0	3,417,650	0	0	6,450,056	9,867,706
CONNECTICUT	17,090,799.40	400,000	1,000,000	3,100,074	1,000,000	3,118,503	9,650,000	18,268,577 *
DISTRICT OF COLUMBIA	2,404,000.09	0	0	787,044	409,984	898,553	86,554	2,182,135
DELAWARE	4,778,026.38	0	0	0	2,500,000	0	1,573,750	4,073,750
FLORIDA	46,497,468.07	0	0	0	13,250,000	0	20,830,000	34,080,000
GEORGIA	22,410,800.78	516,122	100,000	150,000	0	450,000	18,658,890	19,875,012
GUAM	1,483,081.65	65,029	0	0	0	0	0	65,029
HAWAII	6,914,656.61	0	0	0	0	0	0	0
IOWA	13,112,829.02	15,770,000	0	230,000	0	5,400,000	2,480,000	23,880,000 *
IDAHO	4,130,331.43	0	0	500,000	0	0	2,865,000	3,365,000
ILLINOIS	46,223,953.86	0	0	0	4,550,000	11,500,000	30,421,000	46,471,000 *
INDIANA	24,789,227.59	400,000	0	50,000	2,282,693	0	20,103,410	22,836,103
KANSAS	11,281,662.72	0	0	170,000	106,000	0	2,676,397	2,952,397
KENTUCKY	12,900,243.48	0	0	0	0	13,230,846	0	13,230,846 *
LOUISIANA	23,937,622.21	0	0	0	0	0	16,500,000	16,500,000
MASSACHUSETTS	34,450,903.46	0	2,000,000	13,500,000	0	17,000,000	6,500,000	39,000,000 *
MARYLAND	18,018,989.35	4,970,000	3,125,000	918,500	5,065,300	4,539,109	1,180,394	19,798,303 *
MAINE	7,398,155.38	350,000	600,000	950,000	3,125,000	1,800,000	505,000	7,330,000
MICHIGAN	34,299,847.58	0	0	1,500,000	3,717,257	19,177,000	19,268,259	43,662,516 *
MINNESOTA	17,463,451.39	0	0	0	8,320,000	0	8,459,000	16,779,000
MISSOURI	19,870,532.89	0	0	500,000	2,863,614	2,079,183	8,570,700	14,013,497
MARIANA ISLANDS	92,711.08	0	0	0	0	0	25,275	25,275
MISSISSIPPI	13,742,490.27	0	5,070,000	1,663,227	1,250,000	1,000,000	3,300,000	12,283,227
MONTANA	4,555,051.17	0	0	338,000	850,000	0	2,476,042	3,664,042
NORTH CAROLINA	22,587,718.56	0	0	0	0	4,000,000	17,916,763	21,916,763
NORTH DAKOTA	3,688,661.55	0	0	0	0	1,000,000	4,500,000	5,500,000 *
NEBRASKA	7,421,264.67	0	0	0	600,000	0	0	600,000
NEW HAMPSHIRE	4,690,380.77	0	0	391,568	982,170	0	2,800,000	4,173,738
NEW JERSEY	37,150,035.45	0	0	0	0	0	25,775,000	25,775,000
NEW MEXICO	6,992,377.81	0	1,100,000	0	100,000	0	7,800,000	9,000,000

PROPOSALS FOR USE OF STRIPPER WELL
OVERCHARGE FUNDS BY STATE AND PROGRAM
AS OF 02/10/89

STATE	TOTAL DISTRIBUTED TO STATES	FES	ICP	SECP	WAP	LIHEAP	OTHER	PROGRAMMATIC TOTAL
NEVADA	4,076,385.32	0	0	0	0	485,000	5,865,000	6,350,000
NEW YORK	77,928,420.00	0	8,000,000	3,250,000	0	7,569,468	46,250,000	65,069,468
OHIO	37,816,270.65	327,000	0	0	8,900,000	3,400,000	24,622,457	37,249,457
OKLAHOMA	12,429,355.70	0	0	319,419	618,000	675,000	11,873,900	13,486,319 *
OREGON	9,975,613.62	0	0	0	600,000	0	10,334,319	10,934,319 *
PENNSYLVANIA	46,857,257.52	1,389,000	2,306,000	2,429,000	0	14,394,000	770,000	21,288,000
PUERTO RICO	9,587,257.19	0	0	0	0	0	0	0
RHODE ISLAND	3,990,138.39	158,000	0	522,000	0	2,500,000	162,000	3,342,000
SOUTH CAROLINA	11,997,963.36	1,687,031	0	4,841,280	74,000	0	3,563,652	10,165,963
SOUTH DAKOTA	3,598,403.89	0	0	141,750	0	0	2,754,271	2,896,021
TENNESSEE	16,283,467.23	0	0	2,000,000	0	0	2,600,000	4,600,000
TEXAS	74,246,353.66	0	460,823	248,733	0	7,351,000	44,419,732	52,480,288
UTAH	5,937,114.46	0	0	250,000	0	25,000	4,865,000	5,140,000
VIRGINIA	25,828,145.80	0	0	0	20,000,000	0	800,000	20,800,000
VIRGIN ISLANDS	4,655,338.04	0	0	0	0	0	0	0
VERMONT	2,408,636.86	0	0	0	550,000	800,000	252,400	1,602,400
WASHINGTON	15,368,578.34	0	0	511,867	0	1,916,408	11,259,701	13,687,976
WISCONSIN	17,706,956.08	2,000,000	1,155,059	5,028,808	0	3,101,000	6,900,000	18,184,867 *
WEST VIRGINIA	6,014,553.97	0	0	0	250,000	250,000	5,874,136	6,374,136 *
WYOMING	4,103,867.26	140,000	0	1,200,000	262,500	150,000	1,640,000	3,392,500
TOTALS	1,006,371,760.97	29,800,082	25,311,178	49,095,520	85,153,376	131,535,070	526,938,491	851,226,217

*Program Total greater than allocation due either to allocated interest or allocation of projected receipts.

3/1/89

EXXON FUNDS

INSTITUTIONAL CONSERVATION PROGRAMS

SUPPORT OFFICE	STATE	UNDER REVIEW	APPROVED	TOTAL PROPOSED
ATLANTA	AL	0	7,353,000	7,353,000
ATLANTA	FL	64,000	38,866,000	38,930,000
ATLANTA	GA	0	15,847,000	15,847,000
ATLANTA	MS	0	11,092,000	11,092,000
ATLANTA	NC	0	2,496,000	2,496,000
ATLANTA	PR	0	1,850,000	1,850,000
ATLANTA	SC	0	1,750,000	1,750,000
ATLANTA	TN	0	9,918,000	9,918,000
ATLANTA	VI	0	30,000	30,000
BOSTON	CT	0	1,000,000	1,000,000
BOSTON	ME	0	1,000,000	1,000,000
BOSTON	NH	0	79,088	79,088
BOSTON	RI	0	1,000,000	1,000,000
CHICAGO	IN	0	206,106	206,106
CHICAGO	OH	0	3,114,486	3,114,486
DALLAS	AR	178,378	13,105,358	13,283,736
DALLAS	LA	0	5,019,229	5,019,229
DALLAS	NM	0	798,235	798,235
DALLAS	OK	476,618	1,593,981	2,070,599
DALLAS	TX	0	1,621,400	1,621,400
DENVER	ID	0	898,143	898,143
DENVER	MT	0	938,957	938,957
DENVER	ND	0	1,582,286	1,582,286
DENVER	SD	0	1,000,000	1,000,000
DENVER	UT	0	1,223,399	1,223,399
DENVER	WY	0	101,980	101,980
KANSAS CITY	KS	0	4,249,644	4,249,644
KANSAS CITY	MO	0	10,592,887	10,592,887
NEW YORK	NJ	0	18,972,706	18,972,706
NEW YORK	NY	0	22,796,867	22,796,867
PHILADELPHIA	DC	0	400,000	400,000
PHILADELPHIA	DE	0	3,349,305	3,349,305
PHILADELPHIA	MD	0	3,000,000	3,000,000
PHILADELPHIA	PA	0	5,760,627	5,760,627
PHILADELPHIA	VA	0	1,835,835	1,835,835
PHILADELPHIA	WV	0	471,499	471,499
RICHLAND	AK	0	900,000	900,000
SAN FRANCISCO	AZ	0	451,911	451,911
SAN FRANCISCO	HI	0	4,250,000	4,250,000
SAN FRANCISCO	NV	0	215,077	215,077
		718,996	200,731,006	201,450,002

3/1/89

EXXON FUNDS
WEATHERIZATION ASSISTANCE PROGRAMS

SUPPORT OFFICE	STATE	UNDER REVIEW	APPROVED	TOTAL PROPOSED
ATLANTA	AL	385,000	2,900,000	3,285,000
ATLANTA	FL	0	217,000	217,000
ATLANTA	GA	0	11,998,000	11,998,000
ATLANTA	KY	0	5,249,000	5,249,000
ATLANTA	MS	0	5,700,000	5,700,000
ATLANTA	NC	0	7,400,000	7,400,000
ATLANTA	TN	0	22,500,000	22,500,000
BOSTON	MA	0	28,732,882	28,732,882
BOSTON	ME	0	4,800,000	4,800,000
BOSTON	NH	0	660,000	660,000
BOSTON	RI	0	893,400	893,400
BOSTON	VT	0	1,758,000	1,758,000
CHICAGO	IL	15,500,000	37,000,000	52,500,000
CHICAGO	MI	2,977,500	12,988,700	15,966,200
CHICAGO	MN	4,000,000	5,500,000	9,500,000
CHICAGO	OH	16,516,910	34,584,759	51,101,669
CHICAGO	WI	7,000,000	10,700,000	17,700,000
DALLAS	AR	0	2,500,000	2,500,000
DALLAS	LA	0	10,000,000	10,000,000
DALLAS	NM	1,559,981	3,777,544	5,337,525
DALLAS	OK	96,000	5,196,631	5,292,631
DALLAS	TX	0	3,500,000	3,500,000
DENVER	CO	0	5,554,476	5,554,476
DENVER	ID	0	3,334,514	3,334,514
DENVER	MT	0	4,446,000	4,446,000
DENVER	ND	0	2,382,595	2,382,595
DENVER	SD	0	1,000,000	1,000,000
DENVER	UT	0	4,000,000	4,000,000
DENVER	WY	0	2,000,000	2,000,000
KANSAS CITY	IA	0	4,769,395	4,769,395
KANSAS CITY	KS	0	993,716	993,716
KANSAS CITY	MO	0	14,332,528	14,332,528
NEW YORK	NY	0	37,455,127	37,455,127
PHILADELPHIA	DC	142,857	900,000	1,042,857
PHILADELPHIA	DE	0	2,000,000	2,000,000
PHILADELPHIA	MD	4,034,289	23,688,677	27,722,966
PHILADELPHIA	PA	0	16,082,000	16,082,000
PHILADELPHIA	VA	5,300,000	10,200,000	15,500,000
PHILADELPHIA	WV	1,000,000	2,183,846	3,183,846
RICHLAND	AK	2,300,000	4,000,000	6,300,000
RICHLAND	OR	2,000,000	12,446,512	14,446,512
RICHLAND	WA	0	8,744,019	8,744,019
SAN FRANCISCO	AZ	0	2,000,000	2,000,000
SAN FRANCISCO	HI	0	1,600,000	1,600,000
SAN FRANCISCO	NV	0	1,984,274	1,984,274
		62,812,537	384,653,595	447,466,132

3/1/89

EXXON FUNDS
ENERGY EXTENSION SERVICE

SUPPORT OFFICE	STATE	UNDER REVIEW	APPROVED	TOTAL PROPOSED
ATLANTA	AL	0	2,298,000	2,298,000
ATLANTA	FL	0	2,003,000	2,003,000
ATLANTA	GA	0	2,425,000	2,425,000
ATLANTA	MS	0	1,126,000	1,126,000
ATLANTA	NC	0	1,460,000	1,460,000
ATLANTA	TN	0	230,000	230,000
ATLANTA	VI	0	874,000	874,000
BOSTON	CT	0	3,000,000	3,000,000
BOSTON	ME	0	250,000	250,000
BOSTON	NH	0	3,628,986	3,628,986
BOSTON	RI	0	1,045,270	1,045,270
CHICAGO	IN	0	10,000,000	10,000,000
CHICAGO	MN	0	1,268,038	1,268,038
CHICAGO	OH	0	1,869,389	1,869,389
DALLAS	AR	0	6,440	6,440
DALLAS	LA	607,810	0	607,810
DALLAS	NM	0	588,226	588,226
DALLAS	OK	0	1,727,780	1,727,780
DALLAS	TX	0	4,515,720	4,515,720
DENVER	MT	0	152,962	152,962
DENVER	ND	0	24,458	24,458
DENVER	SD	0	232,000	232,000
DENVER	UT	0	150,000	150,000
KANSAS CITY	IA	0	5,353,134	5,353,134
KANSAS CITY	KS	0	231,621	231,621
KANSAS CITY	MO	0	550,773	550,773
KANSAS CITY	NE	0	1,724,861	1,724,861
NEW YORK	NY	0	12,495,399	12,495,399
PHILADELPHIA	DC	0	220,503	220,503
PHILADELPHIA	DE	850,000	39,756	889,756
PHILADELPHIA	MD	0	2,113,596	2,113,596
PHILADELPHIA	PA	0	799,993	799,993
PHILADELPHIA	VA	0	539,813	539,813
PHILADELPHIA	WV	0	274,960	274,960
RICHLAND	AK	0	1,333,484	1,333,484
RICHLAND	OR	0	311,900	311,900
RICHLAND	WA	0	452,556	452,556
SAN FRANCISCO	AZ	0	886,000	886,000
SAN FRANCISCO	CA	0	12,297,499	12,297,499
SAN FRANCISCO	HI	179,406	1,333,622	1,513,028
SAN FRANCISCO	NV	0	744,332	744,332
		1,637,216	80,579,071	82,216,287

STATE ENERGY CONSERVATION PROGRAMS

SUPPORT OFFICE	STATE	UNDER REVIEW	APPROVED	TOTAL PROPOSED
ATLANTA	AL	0	6,755,000	6,755,000
ATLANTA	FL	0	18,059,000	18,059,000
ATLANTA	GA	0	1,505,000	1,505,000
ATLANTA	MS	0	10,711,000	10,711,000
ATLANTA	NC	0	5,850,000	5,850,000
ATLANTA	PR	0	150,000	150,000
ATLANTA	SC	0	1,179,000	1,179,000
ATLANTA	TN	0	3,076,000	3,076,000
ATLANTA	VI	0	1,208,000	1,208,000
BOSTON	CT	0	1,730,000	1,730,000
BOSTON	MA	0	21,700,000	21,700,000
BOSTON	ME	0	6,700,000	6,700,000
BOSTON	NH	0	4,438,000	4,438,000
BOSTON	RI	3,976	3,145,419	3,149,395
BOSTON	VT	0	1,950,000	1,950,000
CHICAGO	IL	0	12,585,133	12,585,133
CHICAGO	IN	0	8,782,963	8,782,963
CHICAGO	MI	177,813	17,229,300	17,407,113
CHICAGO	MN	0	18,298,589	18,298,589
CHICAGO	OH	0	5,390,706	5,390,706
DALLAS	AR	0	3,130,501	3,130,501
DALLAS	LA	4,119,230	0	4,119,230
DALLAS	NM	0	3,280,018	3,280,018
DALLAS	OK	0	7,012,643	7,012,643
DALLAS	TX	0	36,632,221	36,632,221
DENVER	CO	0	18,056,505	18,056,505
DENVER	ID	0	3,925,280	3,925,280
DENVER	MT	0	1,862,150	1,862,150
DENVER	ND	0	1,306,037	1,306,037
DENVER	SD	0	8,700,047	8,700,047
DENVER	UT	0	3,436,000	3,436,000
DENVER	WY	4,000,000	0	4,000,000
KANSAS CITY	IA	0	9,343,785	9,343,785
KANSAS CITY	KS	0	2,044,035	2,044,035
KANSAS CITY	MO	0	8,870,166	8,870,166
KANSAS CITY	NE	0	2,242,589	2,242,589
NEW YORK	NJ	0	4,000,000	4,000,000
NEW YORK	NY	0	72,569,092	72,569,092
PHILADELPHIA	DC	0	774,809	774,809
PHILADELPHIA	DE	0	103,458	103,458
PHILADELPHIA	MD	0	935,178	935,178
PHILADELPHIA	PA	0	5,917,855	5,917,855
PHILADELPHIA	VA	0	6,187,644	6,187,644
PHILADELPHIA	WV	0	2,543,260	2,543,260
RICHLAND	AK	0	256,040	256,040
RICHLAND	OR	0	6,525,827	6,525,827
RICHLAND	WA	0	15,324,997	15,324,997
SAN FRANCISCO	AS	0	300,000	300,000
SAN FRANCISCO	AZ	0	16,149,279	16,149,279
SAN FRANCISCO	CA	27,914,536	41,844,453	69,758,989
SAN FRANCISCO	CM	0	199,670	199,670
SAN FRANCISCO	GU	0	305,214	305,214
SAN FRANCISCO	HI	1,103,000	7,343,772	8,446,772
SAN FRANCISCO	NV	0	1,416,595	1,416,595
		37,318,555	442,982,230	480,300,785

STATE SPENDING OF OIL OVERCHARGE FUNDS

Senator **Domenici**. Second, I wonder if you might be able to determine how much of the oil overcharge funds the States have spent. I think you know something about that.

Dr. **Berg**. Yes, sir; the number that we have right now is that there are still over $3 billion. There is still close to $2.7 billion that has not been spent. Even if the States have allocated their money, they have not spent all their money at this point.

Senator **Domenici**. I'm not sure that this information is available, but do you have a way of determining percentages on how much the States have spent in oil overcharge funds for these energy conservation programs that we're being asked to fund with appropriated grants?

It had been my hope when we started this debate several years ago that States would get the hint. As we gave them the oil overcharge money, they would use it for the same purposes as this energy conservation program, since they seem to think it's a great program.

It seems to me that in many cases, States chose not to spend it there, and then came and asked us for this money.

Dr. **Berg**. Your point is well taken. We can supply it. Some States have done it, and we have actually been tracking the amount they've been spending in the area of weatherization and the institution conservation programs and the State energy conservation programs.

Some States have done a very good job of allocating moneys. The State of Illinois, for instance, set aside almost $62 million for weatherization.

Senator **Domenici**. Can you give us for the record something this committee might review as to how much the States have spent and for what purposes?

Mr. Chairman, again, I state only for myself—I don't know how relevant it will be to anyone else, although it may be—that some of the States really spent the oil overcharge money for things like bridges and roads and other projects.

Clearly, Congress had the intention that they spend it for energy conservation and weatherization purposes. I think it would be a significant advance if that were done.

Can you provide this information even if it's only proportionate?

Dr. **Berg**. Mr. Stewart points out the Exxon funds had to be spent on five programs, four under our jurisdiction here, plus the stripper well which was spent for a number of areas.

We'd be happy to supply that.

Dr. **Berg**. I must say we did not get reports on the LIHEAP fund so we don't know the actual amount that's being spent.

[The information follows:]

How Petroleum Overcharge Funds are Spent

Exxon and Stripper Well overcharge funds have been allocated by the States among eligible energy programs as follows:

Program	Exxon	Stripper Well	Total
State Energy Conservation Program	$539.9	$49.1	$589.0
Energy Extension Service	69.3	29.8	99.1
Weatherization Assistance	455.3	85.2	540.5
Institutional Conservation Program	326.5	25.3	351.8
Low-Income Home Energy Assistance Program	352.1	131.5	483.6
Other	NA	526.9	526.9
Total	1,743.1	847.8	2,590.9

Analysis of State plans for use of Exxon funds shows that a large portion of the funds has been allocated to low-income programs, institutional buildings program (in both ICP and SECP), residential programs, State and local government programs, and small business/commercial programs.

Under the terms of the Stripper Well Settlement Agreement, States may allocate funds to the five energy-related programs referenced in the table above and to a broader range of energy programs, examples of which were attached as Exhibit J to the Agreement. Exhibit J, which includes such activities as highway and bridge repair, car care clinics, transit system re-fitting, energy management systems, and promotion of high-efficiency appliances, is attached for reference. As the above table shows, the States allocated the majority of Stripper Well funds to this broader range of programs.

INVENTIONS AND INNOVATION PROGRAM

Senator Domenici. On the Energy Conservation Inventions and Innovation Program, would you highlight for the record some of the inventions that have been commercialized?

Dr. Berg. Yes; one I mentioned is a very cost-effective method of producing ballbearings. We have several others that have really taken off. We have one that's a replacement for the steam seal that goes on any steam turbine, whether the steam is generated by coal, oil, whatever it is. It actually increases the efficiency by sealing and eliminating some steam loss.

It's been tested over here by the Department this year. The fellow happened to be a former employee of GE. We've had one other one that is being commercialized and often people pick it up in the grocery store under the trade name of "Tom-ah-toes", which is a way that tomatoes can be packaged and shipped without refrigeration.

We have several of these that we can supply for the record.

[The information follows:]

Commercialized Inventions Supported by the Inventions and Innovation Programs

Starting in 1982 energy related inventions assisted by the Inventions and Innovation Programs began to reach the marketplace. Since that time more than 70 such inventions have been successfully commercialized. These technologies range from a method of preserving fruits and vegetables for shipment without refrigeration to novel steam turbine packing rings to achieve higher efficiencies in electric generator sets, to a system in which knock intensity in individual cylinders in an automobile engine can be sensed and used to control spark timing in the cylinders. Cumulative gross sales and/or royalties from these technologies approximate $350 million.

Oak Ridge National Laboratory monitors the commercial development of inventions which have received technical and financial support from the Inventions and Innovation Programs. The inventions which have successfully reached the marketplace have been briefly documented in a report titled "Energy-Related Inventions Program: Technologies in the Market". The report has been included in the subcommittee files.

TECHNOLOGY TRANSFER

Senator **Domenici**. That's fine. I guess my bottom line is that I'm tremendously interested in why we aren't making more breakthroughs in terms of the transfer of technology to the marketplace.

We're making the scientific breakthroughs, but often we're failing badly when it comes to applying them to marketplace ideas. You seem to be doing quite well; yet, you're asking for less money rather than more for the program.

That concerns me. If we have a successful program in this area—we're only talking about $4.85 million versus $3.85 million—I would hope that you might be an advocate for continuing the program if, indeed, it's successful.

Dr. **Berg**. My predecessor maintains, and I fully agree with her, that this program has been and should be defended. It's a very, very good program.

Senator **Domenici**. Just two more quick questions.

STATES' USE OF OVERCHARGE FUNDS

If you do not have all the information with reference to how the States expended their allocated oil overcharge funds, is there anything prohibiting you from asking the respective Governors how the money has been allocated and spent in the total allocation of funds to the States?

Dr. **Berg**. There's no statutory requirement that they provide the information. They do that on a regular basis for a lot of information requested from the State and national offices.

But there's nothing that they have to share.

Senator **Domenici**. Mr. Chairman, I won't push this, but I wonder if it would be appropriate to ask the Secretary to inquire as to how the $3 billion in oil overcharge funds were spent?

Chairman **Byrd**. Would you do that?

Dr. **Berg**. We will, sir.

FUNDING FOR GLOBAL CHANGE

Senator **Domenici**. My last question has to do with Federal funding for the global change initiative. Almost everyone here has come around to being concerned about that phenomenon.

My good friend, Senator Bumpers, and I, as junior Members of the Senate, hit on this issue when we were members of the Subcommittee on NASA. I was assigned to that subcommittee early on because the leadership couldn't find any other committee for me to be on.

It was dissolving, so I guess they thought that would be a good one for me. In any event, Senator Bumpers and I found the beginnings of problems in the atmosphere when we were on that subcommittee.

I am amazed to find that we are now talking about trying to scientifically evaluate these changes, and that in the fiscal year 1990 budget request, we are going to spend $190.5 million on research into global climate change—the Department of the Interior, $10 million; Commerce, $20 million; NASA, $21.5 million; Agriculture,

$23 million; DOE $27 million; the National Science Foundation, $53.5 million; and EPA, $35 million.

I don't want you to go into any more detail than you did for Senator Bumpers. But, do you perceive that you and the Department of Energy are principal players in this global climatic change program?

Dr. **Berg**. I'm very pleased to say yes, we are. I think the Secretary-designate has made his position very clear in front of the committee. And we feel that anything that is cost effective should be implemented while they are doing the studies to ameliorate the discharge of the so-called greenhouse gases.

NATIONAL LABORATORIES

Senator **Domenici**. My last question has to do with the nine national laboratories of the Department of Energy, some in whole and some in part, but, nonetheless, they are the largest scientific group in the world.

I think 23,000 scientists, engineers, and support people in those nine laboratories is a phenomenal resource. When you involve yourself in conservation research do I understand that you utilize the national laboratories in that research where they have expertise? Or for your programs, do you essentially go to other entities in the country?

Dr. **Berg**. We do both and we're very pleased with the results we get from our national laboratories. I think that we do stand up in our conservation area.

We are very pleased that the Energy Research Advisory Board recognized that conservation and renewable energy is doing an excellent job of getting their ideas and their technology into the private sector.

Senator **Domenici**. Thank you very much.

Thank you, Mr. Chairman.

Senator **Bumpers**. Mr. Chairman, may I ask one additional question?

Are you getting ready to dismiss the panel?

Chairman **Byrd**. Oh, no, you go ahead.

Senator **Bumpers**. I just had one additional question.

APPLIANCE STANDARDS

Can the appliance manufacturers meet the new appliance standards legislated in the Congress last year without using CFC substitutes?

Dr. **Berg**. The standards specified in the legislation can be met. We're trying to find out if more stringent 1993 standards can be met. As you are aware, we have proposed a range varying from the current legislated level through three more stringent levels and asked appliance manufacturers and others to comment on it. We've got 121 comments on the proposal we are working on right now.

I would like to point out just an interesting experience that happened to me this past weekend. Two years ago I purchased a side-by-side refrigerator-freezer. A week and a half ago, the manufacturer of the refrigerator-freezer called and said that they had to make a change. This past Saturday, they came in and removed the compressor and changed it from a rotary compressor to a reciprocating compressor, because they were having problems.

The rotary compressor was leaking. Of course, in replacing the compressor, they also used more CFC's. In terms of the compressor technology, the rotary compressor is a new technology. Being a person that has worked from basic research all the way up to product development, I have known the joys and the exultation of getting a product and having a customer use it, buy it, and just think it's the greatest thing since sliced bread.

I've also been in the position, the gut-wrenching position, of having to tell my top management that we've got to go back to replace something because it isn't working.

So, every time that we've made one of these changes, we're talking about new technologies. Here was a case where the manufacturer felt they had a product that was worthwhile putting out there.

And they're going back in now and having to remove that. Not only are they winding up having to go backwards but, in addition to that, the poor consumer is having to buy and purchase my unit when he buys a new refrigerator.

Senator **BUMPERS**. Thank you, Mr. Chairman.

METALS INITIATIVE

Chairman **BYRD**. Returning to my earlier subject of steel, as I understood it, the fiscal year 1990 funding requirements for the three ongoing initiatives, in order to keep them on schedule, would be $11.9 million.

Am I correct?

Dr. **BERG**. That's correct.

Chairman **BYRD**. Yet, you're asking for $1 million.

Dr. **BERG**. Yes, sir.

Chairman **BYRD**. What will be the impact on those initiatives of not having the additional $10.9 million?

Dr. **BERG**. I beg to differ with you, sir. We do haven moneys that haven't been spent at the time that they were appropriated, because we didn't have in place necessary arrangements. So, this is a combination.

Chairman **BYRD**. Do I hear you saying that you have the $11.9 million with the $1 million?

Dr. **BERG**. I'm sorry. I misstated. We would need an additional amount in the fiscal year 1990 budget, you are right. I misspoke—we would need an additional $11.9 million.

Chairman **BYRD**. You're asking for $1 million, so you would need $10.9 million.

Now, if you only get the $1 million, what's going to be the impact on these three initiatives?

Dr. **BERG**. It will mean a delay in the programs. As you realize, when we put together this budget, we didn't have the direct reduction program being seriously considered.

The fact that we have this program that was brought forward, we would now say proceeding with that in fiscal year 1990 would be prudent.

I apologize for misstating it.

Chairman **Byrd**. Of the three, if you get the additional $1 million, what will that give you? What would be your total then?

Dr. **Berg**. If we get the additional $1 million?

Chairman **Byrd**. Yes.

Mr. **Streb**. Our current plan is to use the appropriated funds from previous years plus that $1 million to initiate work on the direct steelmaking project, and bring it to a point where design and construction of a pilot unit is possible.

We would be able to complete phase I of the super-plastic steel project. The spray casting project would be interrupted as funds would run out early in fiscal year 1990. On the direct steelmaking project, the entire facility shall be constructed and checked out sometime around May 1990. At that point, because of the shortfall of funds, the industry can make the election to move forward on its own. They all are cost-sharing participants.

Or the project would simply be held in abeyance until future funds were available, by 1991.

Chairman **Byrd**. How much additional money would you need to proceed with the direct steelmaking industry?

Mr. **Streb**. All the additional funds you mentioned earlier, approximately $11.9 million, would be needed to maintain progress on the three projects.

Chairman **Byrd**. As I understand it, the $11.9 million is broken down as follows: $7.8 million—direct steelmaking; $1.1 million for super-plastic steel processing; and, $3 million for spray.

So, if we were looking at direct steelmaking, adding enough money so that you wouldn't have to stop, but that you could proceed on schedule, what would it be? $7.8 million?

Mr. **Streb**. Unfortunately, the numbers I have before me and those you quoted, Mr. Chairman, don't agree.

We can supply that for the record.

Chairman **Byrd**. Because our numbers do agree for the total—$11.9 million.

Mr. **Streb**. I stand corrected. I understand it will be $7.8 million for the direct steelmaking, $3 million for spray casting, and $1.1 million for the super plastic to satisfy fully the needs of that project. We will provide further elaboration for the record.

[The information follows:]

FUNDING AMOUNTS FOR THREE STEEL INITIATIVE PROJECTS

Phase I of the superplastic steel project has been fully funded at $1.5 million. If a decision is made to proceed further, the cost of Phase II is projected to be $1.8 million. If funds are available, $1.1 million would be obligated in fiscal year 1990 and $0.7 million in fiscal year 1991.

Phase I of the steel spray forming project is projected to cost $5.65 million. $1.45 million has been obligated to date. Implementing the research plan as proposed would require $3 million in fiscal year 1990 and $1.2 million in 1991. If a decision is made to proceed further, Phase II is projected to cost $16.4 million.

$8 million has been set aside for funding the direct steelmaking project proposed by the American Iron and Steel Institute. Although the American Iron and Steel Institute's proposal would require over $20 million through fiscal year 1992, the specific amounts needed in the out-years cannot be precisely identified until the negotiations are completed. To complete the work being negotiated in accordance with the plan proposed, an additional $7.8 million would be required in fiscal year 1990, $5.6 million in fiscal year 1991 and $1,023,000 in fiscal year 1992, for a total of $22,423,000.

ADDITIONAL FUNDING FOR STEEL INITIATIVE

Chairman BYRD. So you could efficiently utilize the moneys needed to round out those figures that you just stated if they were available?

Mr. STREB. That's correct.

Chairman BYRD. And it would keep you on schedule?

Mr. STREB. That's correct, Mr. Chairman.

Chairman BYRD. Otherwise, if you only get the $1 million instead of $11.9 million, you're going to have to cut off with respect to the steelmaking, direct steel, at the pilot stage?

Mr. STREB. That's correct.

Chairman BYRD. And that is an exceedingly important initiative, isn't it?

Mr. STREB. Yes, sir.

Chairman BYRD. Because you're bypassing the coke element in the process, which, as you've indicated, helps. It's extremely important with making the steel and the environmental aspects.

Mr. STREB. That's correct.

Chairman BYRD. Let me go to advanced materials. Well, let me just ask one other question.

You did request these moneys at the Secretary's level?

Dr. BERG. At the Assistant Secretary level, yes, sir.

Chairman BYRD. They were reduced there or at OMB?

Dr. BERG. We did not ask for the $11 million, sir, because at that point we did not have the AISI proposal. The AISI proposal came in after the budget had been put together.

Chairman BYRD. Which means that the request was not made at the Secretary's level?

Dr. BERG. That's right.

Chairman BYRD. Because you did not have that——

Dr. BERG. We did not have that information, that's correct, sir.

Chairman BYRD. That in itself would have amounted to what? What dollar amount are we talking about?

Dr. BERG. If we had known the information, we would have asked for another $10.9 million, if we had known at that time that we had proposal such as this and the spray casting.

Chairman BYRD. Why would you have asked? Did you say $10 or $11 million?

Dr. BERG. Eleven million dollars.

Chairman BYRD. Why would you have asked for $11 million for that had you known, whereas, you say here you only need $11.9 million for three—for the three processes?

Dr. BERG. Based on what we have available to us, sir, we have listed three programs, provided funding as best we can to get them going, to keep them moving in some cases. Had we known we had as good a proposal as what was received, we would have asked for more money.

Chairman BYRD. And that would have been how much more?

Dr. BERG. The additional $11 million.

Mr. STREB. $11.9 million is the total requirement for all three projects we currently have underway.

ADVANCED MATERIALS

Chairman **Byrd**. All right. Now, turning to advanced materials, you have demonstrated ceramic materials here. Your budget request contains some $10,330,000 for these materials in fiscal year 1990.

This represents a 31-percent reduction from the current appropriation of $15 million. This program, as I've listened to you, has a high priority within the Department, does it not?

Dr. **Berg**. Yes, sir.

Chairman **Byrd**. Then why the 31-percent reduction?

Dr. **Berg**. Again, sir, under the budgetary constraints that we're working on, we have to fund the highest priorities and the ones where there is cost-sharing.

Again, we have to prioritize our research. If we had more money, there are other projects that are very good that we would have funded. But, we took only the top priority funding.

Chairman **Byrd**. We're only talking about a 31-percent reduction from the current appropriation of $15 million. What would you have liked to have asked for?

I am quite sure, with the promise that these advanced materials offer, I would assume we would have gone for more than the current year's $15 million.

Dr. **Berg**. If I might, we'll have to supply the request to you, sir.

Chairman **Byrd**. All right.

[The information follows:]

Funding Request for the Advanced Materials Program

The Assistant Secretary for Conservation and Renewable Energy request for the Advanced Materials Program in the Transportation budget was the same as the budget request to Congress, i.e., $10,330,000.

FUNDING FOR ADVANCED MATERIALS

Chairman **Byrd**. That presents probably a larger percentage of shortfall than the 31 percent from the total potential.

Dr. **Berg**. If we had had the money, we would not have requested the 31-percent reduction. It was the same that was requested last year. About $15 million.

Chairman **Byrd**. It would have been about the same? This strikes me as being very important, a very important effort to pursue.

Why is it supported?

Dr. **Berg**. I think there are three reasons.

First, the materials themselves are high-temperature material that lend themselves to use in automotive engines.

Second, the lighter weight means less mass movement in the engine itself.

Third, they show properties of decreasing the amount of friction in their use, all of which will add to energy efficiency and increasing gas mileage.

ADVANCEMENTS IN HIGH-TEMPERATURE MATERIALS

Chairman **Byrd**. What advances have been made in the past year in the development of these high-temperature tolerance, noncorrosive materials? I believe you mentioned the noncorrosive element which substitutes in many cases for strategic and critical materials that are in short supply in this country.

When I say why is this important, it goes beyond, doesn't it? It gets into our national security aspects, doesn't it? For example, if we have to bring in titanium from Zimbabwe and the Soviet Union, on the other hand, if we can substitute a ceramic material for that material, doesn't it help?

Dr. BERG. It does, yes, sir.

Chairman BYRD. Are you enthusiastic about these advanced materials?

Dr. BERG. Yes, sir; I think it's one of the greatest things we've got going. Some of the high-temperature materials reasearch with nickel aluminide and some of the other materials have really got excellent potential. It's being picked up, I believe, in seven separate licensing agreements for nickel aluminide materials. We're finding extremely interesting results when we use microwave sintering of ceramics to improve their properties. Indeed, it is very, very good work.

Chairman BYRD. When you say they're being picked up, what do you mean by that?

Dr. BERG. I mean, industry is licensing the technology. They're taking it if it exists. In the ceramics area, people like Cummins Engine & Caterpillar and others are picking it up and utilizing it. In fact, we can show you some of this ceramic material. In the area of nickel aluminide, again they are picking up and putting that into production vehicles, actually spinoff areas as well. Heating elements in the case of some of the nickel aluminide, which we anticipate will actually replace the market we have lost in this country for heating resistance elements in electric stoves.

Chairman BYRD. They're being picked up by Americans. What about the foreign? Are the Japanese picking these up, too?

Dr. BERG. At this point, we have no foreign licensees. We do know some of the American companies, however, and they are using some of these.

BUDGET REQUEST FOR ADVANCED MATERIALS

Chairman BYRD. Well, it seems to me, with the prospects of this, that a 31-percent reduction in the request simply does not make a return.

Dr. BERG. Are you asking me a question? [Laughter.]

Chairman BYRD. I'd like to have your reaction.

Dr. BERG. My reaction is, if there were to be moneys added back, they are definitely priority programs we feel could be served at this point.

Chairman BYRD. If the committee were to add back the 31 percent, how would that—I'd like the opportunity to expand here on this question.

Dr. BERG. What could we use that money for?

Chairman BYRD. Would you submit for the record the itemized account as to what items are being eliminated by the 31 percent reduction?

Dr. BERG. Yes, sir.

[The information follows:]

IMPACT OF 31 PERCENT REDUCTION IN ADVANCED MATERIALS RESEARCH

The 31 percent reduction in the Advanced Materials Program in the transportation budget will result in the elimination of the following work:

Advanced Processing.—In accordance with the program plan for the ceramic technology program and the critical nature of the research area, two major cost-shared (over 25 percent) industry contracts were initiated in fiscal year 1989 for advanced ceramics processing. Both contractors submitted outstanding quality proposals with different but valid approaches. The budget reduction will require the elimination of one contractual effort.

Life Prediction Methodology.—The technology required to predict the characteristics and life of ceramic components based on testing of appropriate test specimens must be developed before application of ceramic components in production engines becomes a reality. After an extensive assessment of industry needs, and again in accordance with the program plan, a competitive solicitation resulted in the award of two cost-shared industry contracts for the development of the critical life prediction technology. The budget reduction will require the elimination of one of these contractual efforts.

New Initiatives.—Several new initiatives have been started in fiscal year 1989 including an effort in advanced processing of ceramic composites, an advanced nondestructive evaluation (NDE) effort to develop new inspection technology, and an industry program to further develop the gel casting process invented at the Oak Ridge National Laboratory. These initiatives will either be terminated or deferred indefinitely as a result of the budget reduction.

UNIVERSITY AND INDUSTRY INVOLVEMENT

Chairman **BYRD**. West Virginia University has initiated its National Research Center for Coal and Energy. This is becoming a first class umbrella research organization which coordinates a wide variety of energy research at the university.

I intend to do all that I can to help this center achieve first class status. One area of importance to the center is the development of advanced materials for high-temperature applications.

What efforts does your office make to bring new organizations into the high-temperature materials program?

Dr. **BERG**. We do this on various requests for proposals and what we try to do is to get industry involved. We try, of course, to get as much as we can in cost sharing. That's the prime goal—for the reason that we do want to involve industry in the research.

We look for the universities to assist in the development of the technology. We try to put together our programs so we have an end use in mind when we start.

Chairman **BYRD**. What assistance can you offer to help West Virginia University to expand its program?

Mr. **STREB**. One very interesting program that was initiated during this past year by General Motors and the Society of Automotive Engineers [SAE] is what is called the methanol marathon. The challenge that has been offered to students at American universities is to take a vehicle and operate it on methanol and not lose performance.

General Motors was a very important participant in this program and provided 15 brand-new vehicles for 15 universities that were selected by SAE.

West Virginia University, I am pleased to announce, was one of the successful candidates in this, and we hope will be one of the participants in the upcoming marathon.

Students take the car, develop and design their own modifications, perform their modifications on that vehicle, and then drive the product back to General Motors in the spring of this year, and participate in a rally that will bring the cars ultimately to Washington.

We think that this relatively small dollar program has tremendous implications in terms of technology, but more importantly the skills and interests that have been engendered amongst the students as a result of their participation in the program.

This is a news release which announces that program and the winners.

[The information follows:]

DETROIT.—The 1,100 mile route for the Methanol Marathon automotive road rally was revealed today at the SAE International Congress and Exposition.

The Marathon is a college engineering student event aimed at learning more about methanol as an alternative to gasoline fuels. It is sponsored by General Motors, the U.S. Department of Energy, and the Canadian Department of Energy, Mines and Resources. It is organized by the Society of Automotive Engineers (SAE) and the Argonne National Laboratory.

According to Donald L. Runkle, vice president in charge of the General Motors Advanced Engineering Staff, the rally—which will culminate 5 months of effort by teams of engineering students at 15 universities and colleges in the U.S. and Canada—will begin on April 29 at the General Motors Technical Center in Warren, Mich., and cover the 1,100 miles in 5 days.

"Nearly 200 of the finest engineering students in North America are working to win the Methanol Marathon," Mr. Runkle stated. "New technical data should come from each team's experience in executing its individual strategy to convert identical Chevrolet Corsicas to burn methanol. The rally itself will give valuable information on how methanol performs under real-world conditions."

Mr. Runkle said the rally will go through Toronto, Ontario; then to Tonawanda, Rochester and New York City, N.Y.; on to Wilmington, Del. and finish on May 3 at the University of Maryland in College Park. Winners will be announced the following day in Washington DC and awarded a share of $20,000 in prizes at an SAE Government/Industry meeting.

"The rally will be an exciting finish to an extremely competitive learning experience for these students," said SAE President George Aravosis. "The event has aroused interest in both the engineering and political communities," he added.

Associate sponsors of the rally are BP Oil Co., The Lubrizol Corp., The Goodyear Tire & Rubber Co., and the Canadian Oxygenated Fuels Association. The Sports Car Club of America, Inc. (SCCA) is conducting the rally.

Last November, each student team took delivery of a 1988 Chevrolet Corsica LT and began converting the car to burn methanol fuel. Each car was equipped with a 2.8 liter multi-port fuel-injected V6 engine, 5-speed manual transmission, sport suspension and air conditioning.

Conversion kits given to the teams contained a stainless steel fuel tank, high-flow fuel pump and fuel injectors, special fuel lines and a computer calibration module. The vehicles will run on a mixture of 85 percent methanol and 15 percent gasoline.

The teams will face off at the GM Tech Center on April 28 to have their cars judged for acceleration, emissions, and conversion design and fabrication the day before the rally begins.

During the rally, the methanol-fueled Corsicas also will be tested for cold start drive ability, fuel economy and rally times. Combined scores from all of the categories will determine the Methanol Marathon winner.

Conversion proposals were received from over 30 colleges and universities in 15 states and Canada. A panel of judges from business and government selected the 15 finalists based on the technical merits of their proposals.

Rally highlights of the Methanol Marathon will include:

Stops at two research facilities (0RTECH in Mississauga (Toronto), Canada, and General Motors AC Rochester Engineering Facility in Rochester, N.Y.) where extensive methanol-fueled vehicle research is done.

A news conference in New York City where six General Motors methanol-fueled buses already are running on city streets.

Stops at GM's Chevrolet-Pontiac-GM of Canada Group (C-P-C) plants in Linden, N.J., and Wilmington, Del., where the Chevrolet Corsica is produced, and at the C-P-C Tonawanda, N.Y., engine plant where the engines for the Methanol Marathon Corsicas were produced. Winners will be announced on Capitol Hill in Washington

D.C. on Thursday, May 4. Congressmen from States where the schools are located will be on hand to congratulate the teams.

The student teams are from the following schools: California State University, Northridge, Calif.; Colorado State University, Fort Collins, Colo.; Concordia University, Montreal, Quebec, Canada; Florida Institute of Technology, Melbourne, Fla.; University of Maryland, College Park, Md.; Michigan Technological University, Houghton, Mich.; University of Michigan, Ann Arbor, Mich.; New York Institute of Technology, New York, N.Y.; Pennsylvania State University, University Park, Pa.; Rochester Institute of Technology, Rochester, N.Y.; University of Tennessee, Knoxville, Tenn.; Texas Tech University, Lubbock, Texas; Washington University, St. Louis, Mo.; West Virginia University, Morgantown, W.Va.; Wichita State University, Wichita, Kan.

Methanol Marathon Rally Route:

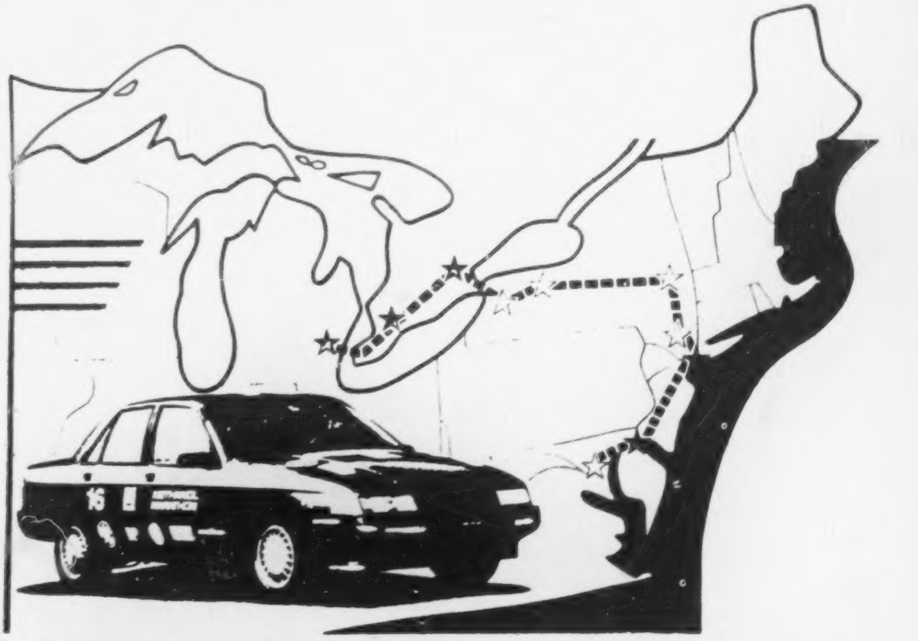
Day 1—April 29.—GM Tech Center, Warren, Mich., to GM Diesel Plant, London, Ontario, to ORTECH, Mississauga, Ontario.

Day 2—April 30.—Mississauga, Ont., to C-P-C Engine Plant, Tonawanda, N.Y., to GM's AC Rochester Engineering HQ, Rochester, N.Y.

Day 3—May 1.—Rochester, N.Y., to Corrigan Goodyear, Utica, N.Y., to Barton-Chevrolet, Newburgh, N.Y.

Day 4—May 2.—Newburgh, N.Y., to Javits Convention Center, New York, N.Y., to C-P-C Assembly, Wilmington, Del.

Day 5—May 3.—Wilmington, Del., to Univesity of Maryland, College Park, Md



METHANOL MARATHON RALLY ROUTE — Teams of student engineers from 15 U.S. universities and colleges will drive Chevrolet Corsicas like the car above in the first-ever Methanol Marathon. The competing teams have converted the cars to burn methanol fuel. They'll leave the General Motors Technical Center at Warren, Mich. (near Detroit) on April 29, 1989, and cover 1,100 miles in five days. The rally route (shown above) will go through Toronto, Ontario; Tonawanda, Rochester and New York City, N.Y.; and Wilmington, Del. It will finish May 3 at the University of Maryland in College Park. The students' experience converting the cars and running the rally will yield valuable data on how methanol performs under real world conditions. The Marathon is sponsored by GM, the U.S. Department of Energy and the Canadian Department of Energy, Mines and Resources. It is organized by the Society of Automotive Engineers (SAE) and Argonne National Laboratory. It is conducted by the Sports Car Club of America.

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COOPERATION ON RESEARCH EFFORTS

Chairman BYRD. All right. I'm delighted to hear that. I'd like for you to work with the university in this area, and I'll cooperate with you in that area.

Dr. **Berg**. If I might just add, we also have now a solar race that is being announced, a GM Sunrayce USA from Disney World to Detroit.

CERAMICS TECHNOLOGY APPLICATIONS EXHIBITS

Chairman **Byrd**. Are these the kinds of materials that you're talking about in the ceramics? Are they going to be useful in the area of superconductivity?

Dr. **Berg**. The materials we're working on here are not superconductive.

Chairman **Byrd**. But the technology can be useful?

Dr. **Berg**. Yes; it can be useful.

Chairman **Byrd**. Would you explain for the record, for Senator McClure and myself and the other Senators, what these ceramics are here and how they fit in to the line of questions we've been exploring?

Dr. **Berg**. Here's one. It's a ceramic valve. It's being tested right now by General Motors. It has some interesting applications. It doesn't burn out. It's lighter-weight so that it doesn't take as much energy to move it up and down.

It's very interesting. We have some examples of wrist pins that are being looked at and some valves you see here that are actually being used. I'm sure this is a water pump seal.

Chairman **Byrd**. And what is this?

Dr. **Berg**. An exhaust manifold liner. And there's a number of other pieces here.

Mr. **Streb**. I think the point is that though our program is aimed predominantly at applications of ceramics to advanced gas turbines and to the advanced, so-called adiabatic diesel, the equipment technology and materials technology has broader application to include the adaptation to existing reciprocating engines, enabling higher efficiency operation, and better performance.

Senator **McClure**. Could I ask a question in that regard? How close are these to really economic applications?

Are these exotic curiosities? Or are they close to application?

Dr. **Berg**. Those valves are not being used right now, but are being tested.

Mr. **Chesnes**. They're very close. As a matter of fact, they tried the valves in a race car for the first time last week. The particular car that had the valves had the fastest time in every race. And actually won. They can pay a little higher price for valves, but it's very close. I'd say, in 1 year, you'll find those in cars.

Senator **McClure**. The bearings?

Mr. **Chesnes**. The bearings. As a matter of fact, a consortium has been put together of the Norton Co. and Torrington, and they're actually selling those worldwide. That's a commercial product.

Chairman **Byrd**. Would you identify yourself for the record? Al Chesnes.

Mr. **Chesnes**. But, industry put the money in for these. They had the basic technology from our contract work and they're taking their own money to look at near-term applications.

Chairman **Byrd**. Do you foresee a use for these in the aviation industry?

Dr. **BERG**. Yes; these can have uses in aviation.

Chairman **BYRD**. All the components in this?

Mr. **CHESNES**. All the black part is ceramics.

Chairman **BYRD**. The rest of it is metal?

Mr. **CHESNES**. Right.

Chairman **BYRD**. Any further questions in the area of advanced materials?

[No response.]

TRANSPORTATION PROGRAM GOALS

Chairman **BYRD**. Turning now to the transportation program, this is the area where our greatest vulnerability to foreign oil exists. Our transportation sector depends on petroleum for 91 percent of its needs. It is almost entirely oil-dependent.

I note in your prepared remarks that 10 million barrels of oil a day are consumed by our transportation needs. That is 63 percent of our total petroleum usage.

In your budget justification, you indicate that within 20 years, 14.1 quads or approximately two-thirds of our transportation energy use could be shifted from petroleum through a combination of efficiency improvements and fuel substitutions.

That's an important goal. Is it a realistic goal?

Dr. **BERG**. Yes; it is.

Chairman **BYRD**. Would you suggest that it is an achievable goal by the year 2010?

Dr. **BERG**. The year 2010 would be the timeframe that I would expect.

Chairman **BYRD**. How do you measure the impact that the Federal investment in transportation research and development is having on our ability and likelihood to achieve that goal?

Dr. **BERG**. It will have direct benefit in reducing the amount of petroleum used to get the same number of miles.

In addition to that, we have alternative fuels and some of the work that we're doing in that area will provide alternative ways to provide additional increases.

Chairman **BYRD**. The fiscal year 1990 request for transportation R&D is down some 45 percent from the current appropriation.

Does the fiscal year 1990 request maintain the pace necessary to meet the petroleum reduction goals of the transportation program?

Dr. **BERG**. At this point, we feel that we can still make it.

Chairman **BYRD**. To meet the goal, but when?

Dr. **BERG**. 2010.

Chairman **BYRD**. Still 2010. It does increase the risk.

Dr. **BERG**. Yes, sir.

Chairman **BYRD**. Aren't we talking about saving billions of dollars in oil imports?

Dr. **BERG**. If you multiply it out, I guess you are.

Chairman **BYRD**. Isn't it very important that we move ahead to make prudent R&D investments and we'll save a lot of money? Save this country billions of dollars?

And also reduce our dependency upon foreign sources, which may not be very dependable in an emergency situation.

Dr. **BERG**. We agree.

Chairman BYRD. By my calculations, the annual value of the oil saved with only a 10-percent efficiency improvement in the automobile and light truck market is some 200 times greater than the current cost of your entire transportation R&D program. Does that strike you as being a fair statement?

Dr. BERG. I would like to take a look at it. It does not sound unreasonable.

Chairman BYRD. A 10-percent savings equals 10 billion gallons of gas, more than $10 billion, which divided by $54.6 million, which is the fiscal year 1989 transportation R&D level, equals approximately $200.

That sounds like a pretty sound investment, $200 savings for every $1 we invest.

If you agree that a 10 percent gain is achievable in the transportation sector, and if the savings are as great as they appear to be—and you might check my figures—then why is this budget cut by 45 percent from the fiscal year 1989 level? Why aren't we pursuing these savings more aggressively?

I don't believe your question is whether we can afford to spend the funds, the question is can we afford not to spend more money on this research.

FUNDING FOR TRANSPORTATION

Why is the budget cut by 45 percent?

Dr. BERG. In order to preserve the most effective use of resources, we try to fund those projects that will still provide us the opportunity to meet our goals.

Granted there are other areas that are certainly worthwhile, and we have been asked to provide those figures for this committee.

If we are going to have additional funds, we ask that they be spent on the priorities we have identified.

Chairman BYRD. What is the budget request?

Dr. BERG. For transportation? The request is $29,754,000 for fiscal year 1990.

Chairman BYRD. The request is how much?

Dr. BERG. $29,754,000.

Chairman BYRD. Is that the Reagan budget or the Bush budget?

Dr. BERG. That's the Reagan budget, yes, sir.

Chairman BYRD. This is the Reagan budget.

Did Mr. Darman notify the Department and agency heads where there is no specific line item requested by the Bush administration?

Dr. BERG. I'm not aware of any interaction between the two.

Chairman BYRD. Senator McClure, do you have any other questions?

Senator MCCLURE. Yes; I do, Mr. Chairman. Thank you.

ALTERNATIVE TRANSPORTATION FUELS

When you look at the transportation fuels and efficiencies, you get into some very complex interrelationships—interrelationships technically and mechanically, interrelationships with other objectives in Government such as the Clean Air Act requirements, foreign policy, foreign exchange goals, and a number of other programs.

What we see in so many instances, however, is sheer economics, overwhelming alternatives, as an example of the difficulty we have of cutting the price of oil from $34 a barrel to $13 a barrel. It changes the relative economics of a number of alternative transportation fuels.

Has that change in relative economics so overwhelmed the alternatives that we've lost interest in alternatives?

Dr. BERG. In some respects, I think that has occurred. In the Washington Post article today, it says that people are going to larger cars and they're driving more. And I suspect that's the net result of cheaper fuel. And it has caused a deviation of the direction people had a few years back when they were thinking more in terms of efficiency.

It is easier for us not to be efficient.

ALCOHOL FUELS

Senator MCCLURE. As I recall the figures—maybe you can correct me—a 10-percent alcohol content requirement in transportation fuels would consume 30 to 50 million acres of production—is that correct—if it came to that?

Dr. BERG. I would have to check that, sir.

Senator MCCLURE. Would you check that for the record?

A 30 to 50 million acre requirement for the production of ethanol would greatly affect the farm bill.

I suspect we would have the same problems on prices for farm products. That was a $27 billion bill last year. We might take a couple of billion dollars out of the farm bill and put it into advanced fuels, as an example. Where are we on ethanol fuels?

Dr. BERG. Regarding the whole alcohol fuel area, we have indeed made strides in the area of converting cellulose into sugars for fermentation such that alcohol production is increased. We are looking at areas for utilizing woody crops also. We've had some great breakthroughs in the pyrolysis of both herbaceous and woody crops looking for fuel oil derivatives we can catalyze to become gasoline or gasoline-like materials and fuel oil material and oils; all these programs, renewable, working with the Department of Agriculture, could alleviate some of the farmers' problems as well by providing them with other cash type crops.

Another program we have in the South is a rapeseed program in which farmers raise rape, harvest it, and that rapeseed can then be processed to form a diesel fuel.

[The information follows:]

AGRICULTURE PRODUCTION FOR ALCOHOL

In the year 1986 approximately 111 billion gallons of gasoline were used by the United States transportation sector. If 10 percent of that fuel were replaced by alcohol, 11 billion gallons of alcohol would be required. Average alcohol production in the United States is about 250 gallons per acre so that a 10-percent alcohol content requirement in transportation fuels would consume about 44 million acres of production.

ECONOMICS OF ALTERNATIVE FUELS

Senator McClure. Let me ask you this question. You've talked about what we've been doing in terms of the technology. What are the economics?

Dr. Berg. The economics are still not good.

Senator McClure. Do you have a fuel equivalent price?

Dr. Berg. If we were to take corn at $2.70 a bushel, that would give you approximately 2½ gallons of alcohol. It would come down to right just about $1.10 for the cost of the corn.

So that, right now, it's not really economical.

Senator McClure. That's $1.10 per gallon.

Dr. Berg. Without any processing.

Senator McClure. That's volumetric equivalency, not energy equivalency?

Dr. Berg. That's correct, because alcohol heat content, as you point out, is not the same.

Senator McClure. It's about 78 percent with ethanol, but there are some other counter-balancing technical arguments also. That is, there is some efficiency to the internal combustion engine as you increase the pressure.

Dr. Berg. With some fuel reduction, correct.

There are also values in the use of ethanol for alcohol fuels, even if you're paying a price as much as 78 percent. That is, it takes more alcohol to drive 600 miles, but you are emitting less carbon dioxide into the air than you are with gasoline. And, in addition to that, of course, in growing a crop, you lock the carbon dioxide into the closed loop cycle.

Senator McClure. Those are technically correct statements. Can you quantify them in terms of volumes or advantages?

Dr. Berg. We'll be happy to do so for the record.

Senator McClure. Would you do that for the record, please?

[The information follows:]

Carbon Dioxide Emissions of Alcohol Fuels

Methanol (and ethanol) has a higher hydrogen-to-carbon ratio than gasoline or diesel fuel. This factor alone produces 15 percent less carbon dioxide per unit of energy than hydrocarbon fuels. Since methanol vehicles would be more fuel efficient than gasoline vehicles, the two factors combined would result in about 20 percent less carbon dioxide from methanol vehicles than from gasoline.

ALCOHOL FUELS EFFICIENCY

Senator McClure. Do you have any information, technical information, with respect to increased efficiency with higher compression ratios?

Dr. Berg. We can develop some.

Senator McClure. If you would please give us that for the record.

[The information follows:]

Alcohol-Fueled Engine Efficiencies

Methanol and ethanol have higher octane number ratings and higher heats of vaporization than conventional gasoline. Alcohols can thus be burned in an engine cylinder at higher temperature and pressures (higher compression ratios). Alcohols also ignite within a wider range of air/fuel ratios than gasoline and have faster flame speeds, and therefore burn better in leaner mixtures with air. Alcohols' lower flame temperatures and faster flame speeds release the heat of combustion more efficiently.

Theoretically, in engines optimized for alcohols, these factors could result in 10 to 30 percent higher thermal efficiencies. Practically, the high end of this range has not been achieved, but the test engines used have not been completely optimized. Actual tests report improvements from 0 to 15 percent.

The conventional wisdom amongst experts is that alcohols may provide 10 to 20 percent efficiency gains over gasoline in optimized engines in which a tradeoff has been achieved between efficiency and emissions. There is wide agreement that, due to physical/chemical properties of alcohols, methanol engines will be more powerful than gasoline engines of the same size and thus roughly of the same cost.

VAPOR LOCK IN HOT CLIMATES

Senator **McClure**. Regarding the efficiencies with respect to CO_2 emissions in nonalcohol fuels, at least one gasoline company has made the claim that they have difficulty with gasoline/alcohol fuel mixtures because of high vaporization rates at high temperatures, causing vapor lock in hot climates.

Are you aware of that claim?

Dr. **Berg**. I'm not aware of that claim. I'm also aware, though, that there are others. It's not a free lunch, by any means, with alcohol. You are getting other things put into the atmosphere. The biggest problem I'm aware of in the use of alcohol has been in the interaction of alcohol with plastic parts.

Senator **McClure**. That's easily corrected by different plastics.

Dr. **Berg**. That is indeed correct.

Senator **McClure**. Let me ask to return to that question of the so-called vapor lock, which led some of them to blame alcohol additives for the problems they were having.

Is it not also true that as you put catalytic convertors on automobiles, you have removed lead from the additives to gasoline?

Dr. **Berg**. It has been removed, Senator.

Senator **McClure**. We could have put a lead separator in, but we chose not to.

Dr. **Berg**. I'm not familiar with that portion of it, whether we could have done that or not. We had to remove it.

Senator **McClure**. The auto industry, particularly General Motors, elected not to. And they set the tone for the industry.

CERAMIC BALL BEARING

Chairman **Byrd**. I'm going to have to run and vote in the Senate. I would like to ask you about the characteristics of the ceramic ball bearing, as to its heat resistance, wear and tear, and it's crossed in comparison with the seal ball bearing.

Dr. **Berg**. We would supply that for you for the record.

Chairman **Byrd**. Yes.

[The information follows:]

Ceramic Ball Bearings Characteristics

The first ceramic bearing manufacturer in the United States is CERBEC, a joint venture between The Torrington Company and Norton Company. The new firm is manufacturing silicon nitride all-ceramic and hybrid-ceramic bearings. At the present time ceramic bearings are more expensive than steel bearings. For example, a ½-inch diameter grade–5 silicon nitride ball sells for approximately $10 per ball as compared with $2 per ball for an aircraft quality M–50 tool steel ball. The price premium for a hybrid silicon nitride machine tool spindle bearing is 2 to 10 times its all-steel equivalent. However, life cycle costs and enhanced performance usually more than justify the extra cost depending on applications. Listed below are typical ceramic bearing characteristics:

High Speed.—Up to 3 million DN with reduced skidding, wear and heat generation; grease-lubricated hybrids up to 1 million DN.

Extended Fatigue Life.—Up to 10 times greater than steel, with appreciable life gains for hybrids.

Marginal Lubrication.—Unique tribological features enhance operation under low lubrication conditions and extend life and speed capabilities of lubricants.

Corrosion Resistance.—Virtually inert silicon nitride resists corrosion and galling, while thin-dense-chrome coating may be used to enhance hybrid results.

High Stiffness.—Modulus of elasticity 50 percent greater than steel increases bearing rigidity.

High Temperature.—Able to withstand temperatures up to 1,800 °F; hybrids up to 1,000 °F.

Low Torque.—Low friction, even under marginal lubrication, with extremely fine surface finishes of 0.1 to 0.2 micro-inch AA.

Long Wear Life.—High hardness of Rc78 greatly extends bearing wear characteristics.

Light Weight.—60 percent lighter than steel, reducing centrifugal forces and overall system weight.

Special Properties.—All silicon nitride bearings are nonmagnetic and electrically insulative.

CHAIRMAN BYRD'S CLOSING REMARKS

Chairman BYRD. And would you then follow on with your questions to Dr. Berg and his associates? And then we can begin with Secretary Adams, the Secretary of the Smithsonian. I'll probably be back by then, but if I'm not, would you handle it?

Senator MCCLURE. I'd be happy to.

Chairman BYRD. I'd like to thank you, Dr. Berg, and your associates, for your appearance here today. We're interested in your work.

We have some questions on the budget. That's pretty apparent, but we'll be supplying additional questions for the record. I have additional questions which I will not proceed with here today, but I'll be writing, and other Senators. If you can respond and elaborate as much as you can.

Dr. BERG. We will do that, sir.

Thank you for this opportunity and I just state I do want to appeal that our staff and your staff work together on these priorities.

Chairman BYRD. We'd like to do that, and we look forward to it. Thank you.

ALCOHOL AND GASOLINE BLENDS

Senator MCCLURE [presiding]. As we took the tetraethol lead out of gasoline, gasoline manufacturers tried to maintain octane ratings by other additives.

Mostly, they were the high-end aeromatics. And the high-end aeromatics are just that. They're more volatile. They vaporize at lower pressures and temperatures than other parts of the gasoline.

Dr. BERG. I see where your questioning is leading, yes, sir.

Senator MCCLURE. And it's likely that vapor-lock was a result of their additive rather than that of alcohol.

Dr. BERG. Without knowing the full details, I would prefer not to comment. But, certainly, your logic is persuasive.

Senator McCLURE. I just hope that some of us aren't quite as foolish as they think the public is.

Do you have any evidence or have you done any research regarding the phenomenon of the volatility of alcohol fuels?

Can you say they are correct or incorrect?

Dr. BERG. If we could, sir, we would like to provide that for the record.

Senator McCLURE. I understand that, but I'm a little concerned about the other because we still have at least one company advertising at the pump no alcohol. So I would deliberately seek out the one that has alcohol used for a variety of reasons.

But I also want to be sure that I am correct. If you have information that bears on that I'd appreciate knowing, because I'm afraid we may be into a marketing strategy rather than a technical discussion from their side.

[The information follows:]

ALCOHOL FUEL VAPORIZATION

The addition of low concentrations of the lower alcohols into larger concentrations of gasoline increases the relative volatility of the lighter hydrocarbon components in gasoline (increased front-end volatility). The reasons for this are complex, having to do with the deviation from thermodynamic ideality of polar molecules (the lower alcohols such as methanol and ethanol), and their ability to increase the vaporization rate of light hydrocarbons relative to heavier hydrocarbons in hydrocarbon mixtures.

Gasolines are blended with butanes and pentanes to meet Reid vapor pressure specifications and any addition of alcohols cause this increase in gasoline front-end volatility. Ideally, gasolines intended for alcohol blending could eliminate this first blending with butanes and pentanes. However, this would require separate storage and distribution facilities for the different gasolines and, if substantial butanes and pentanes were diverted from blending, create an over supply of this refinery fraction.

HYDROGEN AS A TRANSPORTATION FUEL

Senator McCLURE. I would also like to know what you have done with respect to helium fuel research. Helium is a transportation fuel—I'm sorry—hydrogen. Excuse me.

Dr. BERG. Hydrogen has a potential, we feel. It is not a primary fuel. It requires energy to form the hydrogen. We've been looking at various things. We begin on the fuel side of forming hydrogen by biological action; also the great potential of say utilizing, for instance, solar and other energy to provide the energy to disassociate with water.

Hydrogen as a potential fuel is not cost effective at this point nor is it very effective. If we can find solutions for the storage problem and reduce the cost of the technology, hydrogen may have other advantages.

Senator McCLURE. Is hydrogen more difficult to store than other compressed gases?

Dr. BERG. Yes, sir.

Senator McCLURE. What are the reasons for that?

Dr. BERG. Primarily, of course, is its extremely explosive nature. Acetone does a great job of absorbing acetylene; butane and natural gas are easily compressed and stored.

Senator McCLURE. Hydrogen has one advantage over some of the other compressed gases that when it escapes, it goes up.

Dr. **Berg**. And oxidizes and forms water.

Senator **McClure**. Some of the gases, when they escape, tend to pool in low places, basements and otherwise. And the explosive concentration for hydrogen tends to dissipate.

Is this true?

Dr. **Berg**. This is true. Unfortunately, it's also much more volatile, much more dangerous because of flammability, even from a small leak.

Senator **McClure**. Have you done work with respect to the combustion technology and the combustion products of hydrogen?

Dr. **Berg**. We've studied a number of fuels. And we're specifically looking at the question of the hydrogen cycle.

Mr. **Chesnes**. We did a lot of work with the University of Miami. They looked at hydrogen. They looked at utilization.

Senator **McClure**. Are nitrous oxides formed?

Mr. **Chesnes**. We have some reports on that and we can supply that for you. It was several years ago, but they did a complete analysis.

[The information follows:]

TRANSPORTATION HYDROGEN RESEARCH

Although DOE is not supporting any work currently in transportation vehicles utilization of hydrogen as a fuel, a substantial amount of research has been conducted related to fuel storage and engine technology. A summary report covering these activities follows.

HYDROGEN STORAGE AND UTILIZATION IN TRANSPORTATION VEHICLES

SUMMARY

INTRODUCTION

The use of hydrogen as a vehicular fuel has been considered for over 20 years as an attractive long-term approach for replacing petroleum-based fuels. The major reasons for this interest include the following characteristics of hydrogen and its use.

Hydrogen can be made from a variety of abundant domestic resources, e.g., water (by electrolysis) and coal.[1]

Hydrogen represents an energy medium through which abundant nonpetroleum energy resources, such as solar or nuclear energy, can be transformed, transported, and used in a convenient manner.

Under ideal conditions, the combustion of hydrogen produces only water vapor, avoiding the many environmental and health problems (e.g., the "greenhouse" effect, smog, and acid rain) linked to emissions from conventionally-fueled vehicles.

On a per-pound basis, hydrogen has about three times the energy of typical gasoline, although current hydrogen storage constraints more than offset this advantage.

The high reactivity of hydrogen in combustion suggests that hydrogen-powered vehicles could be made more efficient over a wider operating range than current engine technology.

BACKGROUND

In the early 1970's, some energy researchers began promoting the concept of a hydrogen-based energy economy (the so-called "Hydrogen Economy") wherein hydrogen would supply the demands being met by petroleum, natural gas, and coal. The hydrogen produced from nuclear power, solar energy, geothermal energy, and other non-fossil primary energy resources would be distributed by pipeline and used for combustion purposes and regional electricity generation. The preferred approach for electricity generation as part of the Hydrogen Economy would be fuel cells because they are very efficient and can be built on a smaller scale allowing numerous, widely dispersed electricity generation points. This would maximize the less costly transport and storage advantages of hydrogen relative to electricity. The Hydrogen Economy concept also envisioned the use of hydrogen directly in highway vehicles and indirectly as electricity in nonhighway mass transit systems. However, the Hydrogen Economy would not require that hydrogen be used exclusively; rather, it would be used in the applications where most appropriate. Electricity was viewed as the other major energy source in the Hydrogen Economy, with use of hydrogen as a major energy source for its production.

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[1] Hydrogen is actually produced by steam reformation with coal.

The prevalent approach to producing hydrogen today is by electrolysis of water, which separates the hydrogen and oxygen. However, electrolysis requires large amounts of electricity which is a fairly expensive energy form compared to fossil fuels. Although predictions of very inexpensive nuclear-generated electricity were made many years ago, this has not proven to be true, and indeed planning and construction of new nuclear power plants is at a virtual standstill. Coal gasification is projected to be a more appropriate hydrogen source, using water for so-called steam reformation. Also, advances in photovoltaics may eventually make electrolysis economically attractive. Solar energy in "solar towers" and hydroelectric power are considered as inexpensive alternative sources of electric energy.

The Federal Government's involvement in hydrogen energy research began in 1973 with feasibility studies that concluded that hydrogen may be a very attractive future alternative fuel for the post-2000 timeframe, assuming the availability of abundant and inexpensive renewable energy and nuclear power. On this basis, DOE initiated research to explore the feasibility and technology requirements of hydrogen fuel for transportation applications.

FUEL STORAGE AND ENGINE TECHNOLOGY

Hydrogen storage and engine utilization technology emerged from the early studies as the major areas needing to be addressed. The scope and key results of several years of R&D conducted with funds from a variety of sources including the Department of Energy (DOE) are described in the following.

Hydrogen storage.—Hydrogen has a very high energy content, but its low density requires very high storage volumes. In addition, hydrogen containment systems are typically very heavy. The smallest and lightest storage system is that for liquid hydrogen. The objective of the hydrogen storage research was to identify technologies that would allow practical hydrogen storage on transportation vehicles. The techniques investigated included metal hydrides, liquid storage, chemical storage, and on-board reformation.

Liquid Storage.—Hydrogen must be cooled down to −253 °C to become a liquid, so extremely effective insulation is needed to store the liquid. Such insulation is used for railway transport of liquid hydrogen, but even advanced containment systems for vehicular use were found to be bulky and to permit appreciable hydrogen boil-off. To minimize surface area (and consequently, heat transfer), most liquid hydrogen tanks must approximate a spherical shape. Some vapor storage space must be provided for expansion and provision must be made to vent excess hydrogen gas to the atmosphere. Liquid hydrogen storage systems are approximately 2.5 times heavier and 3.5 times larger than comparable gasoline systems (including fuel) to provide an equivalent range. In addition, use of liquid hydrogen is estimated to increase production-vehicle cost by 10 to 20 percent. [1] Another disadvantage is that about one-third of the heating value of hydrogen is used in liquefying it. It is unlikely that the bulk and cost problems of liquid storage can be overcome, yet it provides the best bulk and weight characteristics of the hydrogen storage options.

Metal Hydrides.—These are metallic alloys which hold and release hydrogen depending on temperature and pressure conditions. Metal hydrides have the potential to store hydrogen more densely than liquid hydrogen or high-pressure gas storage. The absorption of hydrogen by a metal hydride gives off heat, requiring a cooling or heat recovery system for effective results during refueling. Conversely, the evolution of hydrogen from the metal storage for engine use necessitates heating of the hydride to ensure adequate flow to the engine. The engine exhaust is the most appropriate heat source for this purpose.

Iron-titanium hydride was found to work effectively at atmospheric pressure and engine exhaust temperatures. However, its weight and volume are large compared to gasoline storage, detracting substantially from its appeal. However, this has been the typical storage technique in experimental vehicles. [2]

A screening of potential metal hydrides to seek a better composition revealed that magnesium-based hydrides were the most attractive among other candidates for hydrogen storage. These hydrides were found to store hydrogen at nearly twice the density of liquid hydrogen, but they suffered from a number of disadvantages. The primary problem is a hydrogen release temperature dissociation of about 300 °C at atmospheric pressure. This is too high for effective use of engine exhaust heat. To avoid burning of fuel to provide process heat and operate solely from engine exhaust heat, it is desired to modify the hydride to provide dissociation at a temperature of about 200 °C. Addition of nickel in small enough quantities to be economically practical partially accomplished this, but even with tertiary materials, it did not prove successful. [3] Vehicles with iron-titanium storage result in operation and range similar to diesels, but they are heavy and require significant fuel storage space much like that of lead-acid battery powered electric vehicles. Metal hydride hydrogen storage is relatively safe as can be evidenced by tests firing incendiary bullets into the tank with only minor fires resulting.

Chemical Storage.—A number of chemical compounds have a high hydrogen fraction and can therefore serve as hydrogen carriers. Some of these will release the hydrogen at or near atmospheric pressure when elevated in temperature. Thus use of the engine exhaust heat will provide hydrogen for fuel. One potential approach is to use a recyclable hydrogen carrier. Following removal of the hydrogen, the hydrogen-depleted carrier would then be recharged at a central facility. There are a class of such compounds, any of which might be used. One of these, which is representative of how all of them work, is methylcyclohexane. Methylcyclohexane would be reduced to toluene after providing its hydrogen, and the toluene would then be reprocessed at a central plant back into methylcyclohexane. Considerable technical information exists on this combination, so it was thoroughly analyzed. Although this approach appeared to be technically feasible, the hydrogen storage density was between that of liquid hydrogen and metal hydrides. [4] Furthermore, the complications of carrying both charged and spent chemical on board the vehicle and the logistics of chemical carrier regeneration were perceived to be major drawbacks of this technique.

Another method for chemical storage of hydrogen is as methanol. Methanol can be decomposed by vaporizing it and passing it over a catalyst. One disadvantage is that the resulting hydrogen has less energy than the methanol carrier as part of the energy is contained in by-product carbon monoxide. By addition of water to the methanol on a one-to-one molar basis, there is more energy in the resulting hydrogen than in the original methanol. This was verified in practice, but the resulting system is also heavy and bulky. [5] Abbreviated experimentation indicates that use of methanol with higher-order alcohols or any contaminants deteriorates the catalyst used. Selective development of catalysts tailored to specific fuel compositions would be needed; based on this experience.

ENGINE UTILIZATION TECHNOLOGY

An initial report on the status of hydrogen engine research led to a DOE-sponsored major research effort aimed at obtaining preliminary, but comprehensive, performance and emissions characterization of hydrogen engines for future reference. Nineteen distinct configurations for operation of a single basic engine on hydrogen were tested by varying the application of: open and prechamber combustion chambers; carbureted, timed port injection, and in-cylinder injection fuel induction; throttled and unthrottled engine power control; and exhaust gas recirculation, water induction, and air injection to control fuel system flashback (backfire) and to lower exhaust emissions. [6] By combining throttled operation at light loads, unthrottled operations at all other points, and judicious selection of air-fuel ratio at high loads, engine operation could be optimized for both thermal efficiency and exhaust emissions. The maximum thermal efficiency achieved was not significantly higher at maximum power than typical gasoline spark-ignition engines, but fuel economy was expected to be better because of better relative efficiency at intermediate engine loads. Emissions of NO_x can be several times that when using gasoline. However, results below Federal limits were predicted possible without emission control when appropriate features are provided. Maximum engine power output was still limited by the displacement by the hydrogen of air otherwise available for combustion. This means that a larger displacement engine is required to avoid power loss.

Direct injection was investigated as an alternative to homogeneous-charge engine configurations. Injection of hydrogen into the cylinder produced maximum power output equal to gasoline operation. Direct injection will be more complex and costly than gaseous hydrogen fuel systems.

The unique forceful backfires, known as flashbacks, characteristic of hydrogen engines were found to be reduced by various techniques including throttling, exhaust gas recirculation, water injection, and enhanced cooling of combustion surfaces. However, none of these approaches were found effective in completely eliminating flashback. The combined use of forced cylinder scavenging and glow plug ignition is believed to be an approach for completely eliminating flashback.

Numerous experimental hydrogen-powered vehicles have been built and operated around the world, some using technology developed under DOE sponsorship. For example, in the U.S., the Los Alamos National Laboratory, in cooperation with Germany's DFVLR organization, successfully concluded routine driving/refueling tests with a liquid hydrogen fueled Buick sedan. In the Federal Republic of Germany, the DFVLR developed and road-tested a liquid hydrogen/gasoline dual-fuel BMW sedan. Also, Japan's Musashi Institute of Technology developed a hydrogen engine/vehicle system, known as the "Musachi 5" car, which was demonstrated in California. However, all to date have used gasoline engines modified to burn hydrogen. The results of this experimentation provides the basis for design of a first-generation, hydrogen-fueled engine.

The performance of hydrogen vehicles is predicted to be equal to current diesel vehicles and with larger displacement engines potentially equal to that of current gasoline vehicles. Hydrogen remains too expensive, however, to displace any existing fuels. In addition, the weight and volume penalties of hydrogen storage concepts are significant disadvantages. Hydrogen storage systems can compete directly with battery storage systems of electric vehicles in terms of volume and weight, with the added advantage of an operating range comparable to gasoline vehicles.

FUTURE OPTIONS

DOE has funded about $200 million worth of R&D over a decade on hydrogen production, transport, storage, and use as a transportation fuel. Support of hydrogen production technology continues at DOE at a low level. DOE is in a position to resume hydrogen vehicle R&D should a breakthrough occur in storage technology and/or hydrogen energy costs become attractive. Any new initiative would progress through storage system development, design and testing of a hydrogen-optimized engine, proof-of-concept vehicle demonstration, and resource/applications system studies. In the meantime, DOE continues to monitor relevant events worldwide and to cooperate as appropriate with those interested in hydrogen energy applications.

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FORMATION OF NITROUS OXIDES

Dr. **BERG**. Generally speaking, any oxidation will occur using air and form nitrous oxides in the process.

Senator **McCLURE**. I would like a comparison between nitrous oxide and the combustion of hydrogen and the combustion of other fuel mixtures currently in use.

Dr. **BERG**. We can supply that.

[The information follows:]

HYDROGEN COMBUSTION EMISSIONS

The main product of combustion of hydrogen is water, although small amount of hydrogen peroxide may be produced under lean fuel conditions and very small amounts of unburnt hydrogen may also be emitted. Nearly all of the NO_x produced by the combustion of any fuel is caused by the reaction of combustion air oxygen and nitrogen at high chamber temperatures under near stochiometric fuel/air proportions. This NO_x is called thermal NO_x. Hydrogen is considerably more thermally efficient than gasoline since hydrogen burns better in excess air and leaner mixtures generally are more thermally efficient. In addition, hydrogen ignites at much lower temperatures than gasoline. Therefore, NO_x formation is considerably lower than gasoline combustion per mile of vehicle travel.

Hydrogen is clearly the least polluting of available fuels for internal combustion engines. Except for the contribution of lubricant combustion, hydrogen also produces essentially zero unburnt hydrocarbons, carbon monoxide, and carbon dioxide.

ADDITIONAL COMMITTEE QUESTIONS

Senator MCCLURE. As I stated earlier, I have some other questions to submit for the record.

I'd like, of course, to have the answers to the written questions back as soon as you can reasonably do that. I don't think there's a deadline, however.

Thank you very much for your testimony.

Dr. BERG. Thank you very much.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Steel and Aluminum Initiative

Question: How do the authorities in the recently-passed Steel and Aluminum Energy Conservation and Technology Development Act (P.L. 100-680), otherwise known as the Metals Initiative, differ from those under which you were previously conducting the steel research program?

Answer: Under the new law, DOE may, for a period of up to 5 years, provide appropriate protections against the dissemination of information that: (a) results from research and development activities conducted under the Act; and (b) would be a trade secret or commercial or financial information. This protection would include exemption from subchapter II, Chapter 5 of title 5, United States Code. In addition, new funding levels for the program were authorized.

Substitutes for Petroleum in Transportation

Question: In addition to the research on efficiency improvements, there is substantial opportunity to reduce our dependence of foreign oil by developing fuel substitutes, isn't there?

Answer: Yes, there are opportunities to reduce our dependence on foreign oil by developing cost-competitive fuel substitutes for the transportation sector. Ethanol and methanol are considered potential transition fuels in our efforts to become less reliant on petroleum products in transportation vehicles. Methanol can be produced from natural gas, coal, or biomass. But its combustion does result in carbon dioxide and other oxygenate emissions, so it may not be the long-run solution to the transportation fuel choice problem. It may also not be cost competitive if developed on a large scale basis using natural gas as the feedstock.

Electric and hybrid vehicles offer an opportunity to become less reliant on oil and on other carbon-based fuels (to the extent that the electricity is produced by nuclear and/or solar energy).

Question: The budget justification indicates (page 312) that fuel substitutes account for more than half of the potential to reduce our petroleum use in the transportation sector. By my calculations on the information that you have provided to the Subcommittee, these substitutes have the potential in twenty years, to save up to three-and-one-half million barrels of oil per day (54% of 14.1 quads), is that correct?

Answer: The potential oil reductions listed in the budget justification do show a very large contribution by fuel substitutes. Your estimate of 3.5 million barrels of oil per day is a correct interpretation of those potentials. But that potential substitution may not be cost effective and could only be achieved under the most favorable set of circumstances.

Question: I presume that, in large measure, the degree to which this potential is achieved is dependent on the price of oil, wouldn't you agree?

Answer: You are correct that the actual use of alternative fuels will be dependent on the price of oil and gas. Methanol will become more attractive than gasoline if oil prices increase sufficiently and gas prices do not rise proportionately. Likewise, the initial higher cost for electric vehicles could be overwhelmed by lower life cycle costs if gasoline prices rise sufficiently.

Question: If three-and-one-half million barrels of oil per day is the potential savings from substitutes in the year 2010, what do you predict is the realistic level of substitutes by that time and what does that prediction assume about oil prices?

Answer: It is hazardous to predict what actually will occur with respect to the level of substitutes. Our Office of Transportation Systems conducted a Delphi study which employed 58 transportation experts from government, industry, and academia to obtain some insight into the substitution potential. The estimates provided by these experts (the median substitutions were used to represent the entire group's thinking) are as "realistic" as any at our disposal. We asked for their substitution levels under two 2010 price scenarios: gasoline at $1.50 a gallon (in real 1988 dollars) and at $3.00 a gallon. The Delphi respondents said methanol could substitute for 300 thousand barrels per day under the $1.50 scenario and for 1.17 million barrels per day under the $3.00 scenario. For electric vehicles, the substitution was expected to be 15 thousand barrels per day for the $1.50 scenario and 176 thousand barrels per day for the $3.00 scenario.

However, we should point out that U.S. energy policy is replete with examples where the experts were wrong. It is perhaps more important to recognize that the price of natural gas cannot increase greatly before methanol becomes uneconomical when compared with gasoline. DOE is doing a detailed study of methanol. It will be completed this year.

Alternative Fuels

Question: Last year, S. 1518, the Alternative Motor Fuels Act of 1988 was enacted into law (P.L. 100-494). This bill passed both Houses overwhelmingly, a reflection of Congress' growing concern over urban air pollution and our energy security vulnerability. S. 1518 authorized $18 million over the four-year period from FY 1990-FY 1993 to develop and demonstrate natural gas and alcohol-fueled motor vehicles (light duty vehicles, heavy duty trucks and buses).

Does the Department intend to fully support this alternative fuels program?

Answer: The Department of Energy does intend to fully support the Alternative Motor Fuels Act of 1988.

Question: In the FY 1990 budget, DOE has requested just $1.5 million to carry out the activities authorized in the Alternative Motor Fuels Act. Does the Department intend to request the remaining $16.5 million authorized in S. 1518 over the next three years? If so, what do you predict will be your funding requests in the out years?

Answer: The timing and amount of funds to be requested to carry out the activities authorized in the Alternative Motor Fuels Act is dependent on a great number of factors which are still to be determined. We have had preliminary meetings with the General Services Administration, the Urban Mass Transportation Administration, the Environmental Protection Agency, the Department of Transportation, and the National Highway Traffic Safety Administration. All of these agencies will be involved in the program, and are developing their requirements for funding, schedules, and interface to be included in interagency agreements. These requirements will be impacted by availability of vehicles, contracting cycles, existing related project activities, and existing procedures for government fleet acquisition and management.

A detailed preliminary program plan is being developed to outline specific tasks, schedules, and resource requirements. The plan will be distributed to the other agencies involved and industry for comments, and the final plan will provide funding estimates for the out years which may be included in future budget requests.

Question: With respect to the heavy duty truck and bus programs included in S. 1518, I understand that development of alternative-fueled medium and heavy duty engines is urgently needed because the EPA 1991 and 1994 standards for particulate emissions from diesel engines are "technology forcing." At the level of funding requested by DOE in FY 1990 for this work on trucks and buses, will the alternative-fueled engines be ready so that trucks and buses will be able to comply with the EPA standards? If not, what will be the impact of these new standards on the truck and bus diesel market?

Answer: The heavy duty diesel engine industry has been working very hard to develop technological options which will allow them to meet the upcoming EPA emissions standards. The major options under investigation include fuel modifications (low sulfur and low aromatics diesel fuel), particulate traps, and the use of methanol as fuel. Although all of these strategies show promise, there are still unknowns such as cost effectiveness, production and maintenance costs, and some hardware development problems. Demonstration and evaluation programs, particularly in the area of alternative fuels utilization, are currently underway in Canada, in California, in New York State, in Florida, in the State of Washington, and in many countries overseas. All of the diesel engine manufacturers also are conducting their own testing and evaluation programs. It is hoped that the additional demonstration and evaluation activities included in S. 1518, when added to the work already underway, will provide enough data for industry to decide on a proper strategy to meet the standards.

Question: Is the $4 million authorized for alternative-fueled trucks and the $2 million authorized for alternative-fueled buses in S. 1518 really sufficient to perform the engine development and demonstration work necessary for these vehicles to be operational by the 1991 and 1994 time frames? If not, what would be an appropriate level of funding for these efforts?

Answer: The $4 million authorized for alternative-fueled trucks and the $2 million authorized for alternative-fueled buses in S. 1518 is focused on demonstration activities which include fuel infrastructure, data acquisition and collection, and analysis and reporting. It is assumed that engine development will continue to be done by industry themselves. The Act does not include funding for engine development efforts. The level of funding for the demonstration activities is appropriate.

Question: Has DOE met with engine manufacturers to determine what research and technology advances are needed to ensure the development of these alternative-fueled medium and heavy duty engines? If so, the Committee would like details on an appropriate R&D program. If you have not reached the point of developing the details of an engine development program, when can we expect you to have this information?

Answer: Several of the engine manufacturers have visited DOE to express their willingness to participate in the demonstration activities covered by S. 1518. In addition, preliminary meetings have been held with the American Truckers Associations to solicit their cooperation. We have also begun distribution of the preliminary program plan to industry for comments. Caterpillar and Mack Truck have already scheduled meetings to discuss their comments and review their technology readiness.

However, our goal has not been the development of an R&D program. The DOE heavy duty transport program has focused on long-range, high-risk R&D such as the minimally-cooled (adiabatic) diesel with waste heat utilization. Although these efforts will have an impact on emissions and fuel flexibility, they are long range in nature and will not have an effect on near-term emissions requirements. The research and development required to meet these near-term EPA standards has essentially been the responsibility of industry, with some basic technology investigations in areas such as combustion and ignition parameters conducted by DOE. There are no plans to change these directions.

Question: With respect to the government demonstrations of light duty vehicles authorized in S. 1518, has DOE conferred with the automobile companies to determine when these alternative-fueled vehicles will be available for the government to purchase?

Answer: Although the responsibility for actual acquisition of the light duty vehicles authorized in S. 1518 rests with the General Services Administration, DOE has discussed availability unofficially with the automobile companies. In general, flexible-fueled methanol vehicles will be available. General Motors has recently signed a contract with the State of California for delivery of 2,800 methanol-fueled vehicles starting at the end of 1990. Ford Motor Company is planning to manufacture two models of flexible-fueled vehicles to be made available to the public in model year 1993, with first production scheduled for late 1992. Chrysler is testing several prototypes and will in all probability also have methanol cars available. However, to our knowledge, none of the automotive companies have plans for a natural gas-fueled vehicle.

Question: It is my understanding that the demonstrations authorized in P.L. 100-494 are limited solely to federal government vehicles. Would it not be more appropriate to include a mix of private sector fleet vehicles?

Answer: The truck and bus demonstrations authorized in P.L. 100-494 are not limited to federal government vehicles, only the light-duty vehicles are so limited. A cooperative cost-shared demonstration activity with a mix of private sector fleet light-duty vehicles could serve to hasten public sector involvement and establish near-term feedback to the automotive industry, although we have no immediate plans to expand the program in that direction.

Automotive Gas Turbine Engines

Question: In Vehicle Propulsion R&D, your goals are to achieve a 30 percent efficiency improvement (over conventional vehicles), using a range of fuels, and still meet environmental emission rules. Is development of a new, advanced automobile engine critical to achieving the energy savings goals of your program?

Answer: Development of a new, advanced automobile engine is critical to achieving the energy savings goals of our program. Even with the utilization of alternative fuels, significant improvements in engine efficiency will be required to meet energy and environmental goals.

Question: You have spent a total of $219 million over the last 12 years to develop an automotive gas turbine engine. How well does your work to date stack up against your program goals, which I just noted; and what is the outlook for the future with regard to your research on this engine.

Answer: The automotive gas turbine development program is considered a highly successful program, and the potential for meeting, or exceeding, the program goals has grown substantially. At the start of the program most people in industry and the scientific community believed there was little chance that a gas turbine engine could be developed to work in the automotive application, and even less chance that ceramics could be developed to operate in such a hostile environment. Proof-of-concept of the engine designs was demonstrated last year, and final development and design of reliable, cost effective ceramic components is the only remaining barrier. The automotive industry is now seriously considering commercial introduction of gas turbine propulsion systems, and General Motors has designed a concept car with a gas turbine engine. The Japanese initiated an automotive gas turbine program this year which is almost identical to ours. In the area of ceramic components, the entire world now believes that structural ceramics are not only feasible, but their use is being expanded into a wide range of near-term applications and commercial products.

Question: You aren't proposing significant research on any other automobile engines, are you?

Answer: Our major research effort on automobile engines is now limited to the gas turbine engine. The automotive Stirling engine program has been completed, and the adiabatic diesel effort is focused on heavy duty trucks and buses.

Question: This year's budget again calls for the elimination of one of the two ceramic turbine engine development teams. Why?

Answer: Either of the two ceramic turbine engine development teams will be adequate to serve as integrators for the ceramic component development efforts. Budget considerations have necessitated limiting funding to costs associated with estimates for supporting one contractor team with 20 percent cost sharing.

Question: The ceramic turbine engine is the only automotive engine that you are developing, and you are proposing to cut that research to only one approach. If development of a new automobile engine is essential to the objectives of efficiency improvement and use of substitute fuels, then aren't you taking a great deal of risk by eliminating one of the two ceramic turbine engine development teams? Isn't this an area where competitive engine, and materials, development is prudent?

Answer: There is some risk associated with the elimination of one of the two ceramic turbine engine development teams. It is also true, however, that U.S. companies could show more of a commitment and willingness to invest in this technology than they do. Government funding is no substitute for private sector interest and is no guarantor of success.

Question: Did the Assistant Secretary's FY 1990 budget request to the Secretary include funds for two engine development teams?

Answer: The Assistant Secretary's FY 1990 budget request to the Secretary did not include funds for two engine development teams.

Question: So, is it fair to say that a second automotive gas turbine development team is one of your highest unfunded priorities?

Answer: Although a second automotive gas turbine development team is of high priority, it is not one of the highest unfunded priorities. The DAS/C Priority Add Backs did not include funding for a second automotive gas turbine team, but the Program Priority Ranking for Transportation over and above these add backs included it as rank number two.

Stirling Engine

Question: Moving on to another topic, last year Senator Harkin and I examined a Stirling engine that was installed in an Air Force truck. It is my understanding that you have spent $140 million over 12 years to develop this engine and its newer, Mod 2, prototypes, yet you do not wish to carry this automotive technology any further. Why are you not continuing this project?

Answer: Upon completion of characterization, testing and demonstration of the Mod II prototype Stirling engines in FY 1989, a large technology base including designs for both Mod I and Mod II engines, engine and component test data, engineering analyses, and detailed design requirements will be available for industry's use in any further commercialization activities. Commercialization efforts focused on demonstrations with potential customers or for further product development should be supported by industry.

Question: Have you received any commitment from industry to enter a cost-shared demonstration of this technology?

Answer: Although an agressive technology transfer effort has been conducted with the developed Stirling engine technology, there have been no commitments from the automotive industry or other industrial organizations to participate in a cost-shared demonstration.

Question: What will become of the 9 prototype engines that have been, or are being, developed?

Answer: There have been 7 Mod I engines (4 of which are still operable) and 2 Mod II engines fabricated under the Automotive Stirling Engine Program. As part of our technology transfer effort, the Mod I engines have been offered to industry and other potential users on a no cost basis for their test and evaluation. Although some potential users such as John Deere, the Air Force and the Army have temporarily evaluated the engines, no one to date has requested any of the engines on a permanent basis. The Mod II enignes will be offered to industry on a similar basis. If there are no requests from industry, or other government agencies or universities, the engines will in all probability be declared surplus and disposed of through normal channels.

Question: Is there any way to ensure that the technology, which was developed at U.S. taxpayer expense, will not simply fall into foreign hands for subsequent development and commercialization?

Answer: The technology developed under the automotive Stirling engine program has been made available to United States industry. The Japanese had a similiar program focused on the automotive application, and that has also been terminated. There are several United States industrial organizations in addition to Mechanical Technology Inc. who are continuing with development of Stirling technology for other stationary applications such as heat pumps and solar, and NASA is investigating Stirling technology for space power. Although the automotive industry shows little or no interest in the Stirling engine, the technology developed under the program is being utilized by other segments of industry for other applications.

Electric and Hybrid Vehicles (EHVs)

Question: How realistic are your program goals of developing a practical, limited-purpose electric vehicle by the early 1990's and of developing a full-performance electric vehicle for commercial production decisions by the late 1990s?

Answer: The program goals for developing a practical, limited-purpose electric vehicle by the early 1990s are realistic. Realism is introduced by the efforts of major automotive manufacturers and OEM suppliers participating in the program. Also, some of the technology that has been developed within the DOE program is already moving toward commercialization. Technological advances in system design and battery improvements are being used in the G-Van and TEVan programs which are scheduled for commercialization in the early 1990s. In addition, improvements are expected to be used to improve the performance of these vans. The development of a full-performance electric vehicle is expected to be available for commercial production decisions by the late 1990s. Sodium-sulfur battery technology has already met power and energy goals for the advanced single-shaft electric propulsion system (ETX-II). Work is concentrating on extended life performance of this battery. Propulsion system technology suitable for this time period has been designed and tested. Major improvements are underway to reduce the size and cost of the high-power electronics and are expected to be completed in FY 1990. The fuel cell battery, which will provide the power and range of an internal combustion engine, is expected to be developed by this time frame.

Question: How do these dates relate to commercial availability and widespread use of electric vehicles?

Answer: Commercialization and production usually follow proof of the technology and decision to go to production by five years although the trend is towards shortening this time frame to three years. By the early 1990s we expect only limited use of electric vehicles in specialty markets for vans. The G-Van and TEVan probably will be produced initially for the "California Initiative" with small growth in sales from other interested parties. Sales will be limited because of limited range and performance. When the advanced battery technology is developed and available in the late 1990s, range and performance will be improved to make the electric vehicle more competitive and suitable for wider application and commercialization.

Question: What are your oil-backout projections for this technology by the year 2010, and what are your related oil price assumptions?

Answer: DOE conducted a Delphi study in 1988 to help obtain realistic and impartial estimates of the oil saving and oil-backout potential of many transportation technologies. Fifty-eight transportation experts from government, industry, and academia provided estimates of the penetration of EHV's in the year 2010 under two price scenarios. The low price scenario was $1.50 a gallon of gasoline (in real 1988 dollars) in 2010, and the high price scenario was $3.00 a gallon of gasoline. The responses were divided into quartiles (fourths) from lowest to highest penetrations. The response that divides the first and second quartile is labeled "low," the response that separates all responses in half is labeled the "median," and the response that divides the third and fourth is labeled "high." The following table shows the potential oil backout:

Oil-Backout Projection

	Thousands of Barrels per Day Gasoline Price	
	$1.50	$3.00
Low	1	23
Median	15	167
High	97	623

Of course, the important question, which is the price of gasoline versus the price at which the technology is economically viable, is not answered by this study.

Question: What are the key technology development issues remaining to be solved, or improved, for EHVs? (Battery development continues to be the key area.)

Answer: Battery technology development continues to be one of the key issues particularly in the areas of lower cost and longer life. In the first market niche of the commercial delivery van, an important acceptance criteria is life-cycle cost which can be lowered through longer cycle life and reduced maintenance costs. Improved battery performance in energy density as well as longer cycle life and reduced costs are required for the passenger car application. Improvements in weight, size, efficiency and cost of both the battery and propulsion technologies will enhance the consumer acceptance of electric vehicles.

Question: Based on the present state of technical development, does the PAFC bus appear to be economically viable in the near future? (Not with current oil prices.)

Answer: The present R&D program is stressing the demonstration of the technical viability of the phosphoric-acid fuel cell system as a power source for an urban bus. An ongoing economic assessment is being carried out as the R&D program proceeds in order to ensure that the resulting system has a reasonable probability of being economically viable. The present cost projections for the purchase and operation of the phosphoric-acid fuel cell-powered bus using methanol fuel indicate that this bus will be cost competitive with the diesel engine bus in the mid 1990's at a diesel fuel price of about $1.00 per gallon. The fuel cell-powered bus offers major advantages in terms of reduced air pollution, quiet operation, and the utilization of nonpetroleum-based fuel. Even though this technology would be economic under the circumstances described above, we expect that the transit operators will be willing to pay a premium for the benefits.

Question: For the last few years, your office has been developing a fuel cell bus at Congressional direction. What is the status of that project, and when will your Phase I evaluation report be completed?

Answer: The project is proceeding according to plan. Phase I, the proof-of-feasibility, will be completed in December 1989. A final report on Phase I should be available by March 1990. The final result of Phase I is a complete fuel cell battery propulsion system (1/2 of full size) operating and evaluated in the laboratory.

Question: What is the present level of cost-sharing in the fuel cell bus program?

Answer: We have two industry contractors in competition carrying out the R&D of Phase I of this program. Each is cost sharing about 30 percent of their respective total R&D cost on this program.

Question: I understand that the Board of Directors of the California South Coast Air Quality Management District has agreed to co-fund a portion of Phase II of this project. If the Board agrees to provide some $2 million for Phase II and is willing to test a demonstration vehicle, would that encourage you to seek funding for the fuel cell bus program in the future?

Answer: The South Coast Air Quality Management District (SCAQMD) Board of Directors has agreed to provide $300,000 for completing Phase I of this program. SCAQMD has proposed to provide $2 million for Phase II of this program and would like to evaluate a proof-of-concept fuel cell battery-powered bus at their facilities in California. Upon completion of Phase I, the Department will determine whether to start Phase II. There will be $600,000 available in carryover in FY 1990.

STATE GRANTS

Again this year the Administration is requesting no funds for Energy Conservation Grants to the States. These grant programs include, for example, the weatherization of low-income homes and state energy conservation planning activities.

Question: What is the Administration's rationale for not requesting funds for the State and Local Grants programs?

Answer: As the result of Court decisions in the Exxon, Stripper Well, and other oil overcharge cases, the States have received $3.6 billion for use mainly in five Federal energy grant programs--the four State and Local Assistance programs in this Department, and the Low-Income Home Energy Assistance Program in the Department of Health and Human Services. This large disbursement is a substantial increase over annual appropriated fund levels. Therefore no Federal grant funds are requested for FY 1990 inasmuch as the programs are being supported with non-appropriated funds.

Question: Is it not correct that the oil overcharge distributions to the States are simply restitution funds for overcharges which occurred during the 1970s?

Answer: Yes; the oil overcharge distributions are the legal remedy for providing indirect restitution to parties injured by alleged violations of the Federal energy price control programs of August 1973 through January 1981.

Question: So these funds really belong to the States, and were not intended by the courts to offset federal funding for these State and Local Grant programs. Dr. Berg, do you have any indication that the distribution of oil overcharge monies to the States bears any correlation to the States' needs under the present State Grants formulae?

Would you provide for the record a table indicating how $200,000,000 would be distributed by State under the oil overcharge formulae and provide, beside that column, another column which compares how much money each State would receive under a $200,000,000 distribution according to the normal State and Local Grants program ratio and formulae? In a third column, please display the result of dividing column one by column two.

Answer: Attached is a table comparing the distribution to each State using the oil overcharge formula and the State and local government formulae. The column entitled "PVE Distribution" reflects the use of the formula used for disbursement of funds under the Stripper Well Settlement Agreement. The same formula was used for the Exxon case disbursement, except the time period was slightly different for the Exxon case.

For the oil overcharge formula, each State's share is based on the ratio which the volume of products consumed between mid 1973 and early 1981 bears to the total volume of products consumed within all States during that period. In making these calculations DOE used the best available data for domestic consumption. In accordance with the Warner amendment, DOE excluded sales of ethane from total sales of LPG. DOE also excluded from the calculations those amounts of both distillate and residual fuel oil which available data show was sold as bunker fuel to foreign flag vessels.

The "total" column for the State and local government computation is the sum of four different formulae. Two hundred million dollars was appropriated for the State and local government grant programs for FY 1989, so the distribution among programs was established as the same as the FY 1989 appropriation. Those appropriations were $161.3M for the Weatherization Program, $25.2M for the Institutional Conservation Program, $9.5M for the State Energy Conservation Program and $4.0M for the Energy Extension Program.

For the Weatherization Assistance Program, each State first receives $100,000 with the exception of Alaska which receives $200,000. The remaining available funds are allocated among the States with a formula that contains the following factor for each State: the heating degree days; the percent of the total number of low-income, owner occupied dwelling units; and the number of low-income, renter occupied dwelling units.

For the Institutional Conservation Program (ICP) each State first receives for administering the program the greater of $30,000 or 5 percent of the State ICP allocation. The remaining available funds are allocated for institutional grants in the States with 7 percent equally allocated to each State; 10 percent allocated on the basis of the State average retail cost per unit of energy; and 83 percent allocated on the basis of the product of the State population and the sum of the State's heating and cooling degree days.

For the State Energy Conservation Program, 25 percent of the available funds is divided equally among the States; 40 percent is divided based on the latest population census; and the remaining 35 percent is based on energy savings projected by each State.

For the Energy Extension Service, the computation is much simpler in that 50 percent of the funds is divided equally among the States, and the remaining 50 percent is allocated based on the latest population census figures.

The last column provides the difference between the States' programmatic and PVE receipts.

In summary, it is difficult to compare the two distributions (oil overcharge versus the energy grant programs) as the bases for the computations are not related. In the case of the oil overcharge, the basis for the computation is the amount of oil and oil products consumed during the period of price controls. For each of the energy grant programs, the formula is based on the goals and the needs of target audiences as contained within the enabling legislation for each of these programs.

EXTENT TO WHICH SOME STATES' SHARE UNDER PVE FORMULA WOULD EXCEED PROGRAMMATIC SHARE (EXCESS INDICATED BY PARENTHESES)

STATE	PROGRAMMATIC DISTRIBUTIONS					PVE	DIFFERENCE
	SECP	EES	WAP	ICP	TOTAL	DISTRIBUTION	(PROG-PVE)
ALABAMA	139,200	69,000	1,431,486	362,098	2,021,784	3,069,025	(1,047,241)
ALASKA	56,300	38,900	1,426,246	145,214	1,666,660	773,852	892,808
AMERICAN SAMOA	43,000	35,700	NA	84,060	162,760	35,621	127,139
ARIZONA	122,800	58,900	599,873	291,073	1,072,646	2,051,529	(978,883)
ARKANSAS	145,400	55,100	1,354,988	254,818	1,810,306	2,545,160	(734,854)
CALIFORNIA	645,600	239,600	4,256,237	1,334,987	6,476,424	18,308,865	(11,832,441)
COLORADO	130,200	60,400	3,615,374	404,917	4,210,891	2,150,467	2,060,424
CONNECTICUT	139,300	62,200	2,245,678	408,624	2,855,802	3,396,518	(540,716)
DELAWARE	61,600	40,600	506,585	128,753	737,538	949,555	(212.017)
DISTRICT OF COLUMBIA	60,700	40,900	601,836	132,594	836,030	477,756	358,274
FLORIDA	290,700	119,500	529,776	693,599	1,633,575	9,240,615	(7,607,040)
GEORGIA	200,400	82,500	1,616,913	461,631	2,361,444	4,453,782	(2,092,338)
GUAM	44,700	36,300	NA	90,420	171,420	294,738	(123,318)
HAWAII	66,400	43,700	166,392	134,789	411,281	1,374,175	(962,894)
IDAHO	67,900	43,600	1,565,250	180,490	1,857,240	820,836	1,036,404
ILLINOIS	407,300	134,000	9,858,714	1,328,889	11,728,903	9,186,258	2,542,645
INDIANA	257,600	82,800	4,629,303	646,453	5,616,156	4,926,455	689,701
IOWA	137,000	60,600	3,894,185	426,911	4,518,696	2,605,961	1,912,735
KANSAS	144,600	55,800	1,787,937	312,288	2,300,625	2,242,047	58,578
KENTUCKY	171,900	67,000	3,094,222	402,018	3,735,140	2,563,713	1,171,427
LOUISIANA	250,300	71,700	704,997	357,043	1,384,040	4,757,213	(3,373,173)
MAINE	74,100	45,100	2,650,757	231,953	3,001,910	1,470,263	1,531,647
MARYLAND	172,400	71,800	2,105,661	455,785	2,805,646	3,580,981	(775,335)
MASSACHUSETTS	195,900	84,900	5,355,802	690,507	6,327,109	6,846,556	(519,447)
MICHIGAN	318,700	115,300	10,915,537	1,140,180	12,489,717	6,814,549	5,675,168
MINNESOTA	189,900	70,600	8,133,463	662,109	9,056,072	3,470,577	5,585,495
MISSISSIPPI	112,900	57,200	929,465	260,085	1.359,650	2,731,096	(1,371,446)
MISSOURI	181,500	77,800	4 275,752	566.360	5,101,412	3,948,945	1.152.467
MONTANA	65,600	42,200	1,843,361	176,400	2,127,561	905,242	1,222,319
NEBRASKA	92,100	49,000	2.022,167	256.589	2,419,856	1,474,856	945,000
NEVADA	71,300	42,300	468,057	155,231	736,888	810,155	(73,267)
NEW HAMPSHIRE	71,600	43,400	1,351,137	199,575	1,665,712	932,137	733,575
NEW JERSEY	312,100	99,000	4,484,260	795,636	5,690,996	7,382,965	(1,691,969)
NEW MEXICO	84,800	46,700	1,285,190	186,102	1,602,792	1,310,128	292,664
NEW YORK	527,300	186,900	16,643,044	1,890,531	19,247,775	15,487,005	3,760,770
NORTH CAROLINA	208,000	86,200	2,586,866	519,185	3,400,251	4,488,941	(1,088,690)
NORTH DAKOTA	59,800	41,100	1,995,069	173,719	2,269,688	733,061	1,536,627
NORTHERN MARIANAS	42,800	35,600	NA	82,825	161,225	18,425	142,800
OHIO	392,100	128,600	9,161,191	1,188,904	10,870,795	7,515,368	3,355,427
OKLAHOMA	146,600	61,500	1,624,070	332,148	2,164,318	2,470,132	(305,814)
OREGON	135,200	58,100	2,120,403	292,291	2,605,994	1,982,491	623,503
PENNSYLVANIA	338,300	137,800	10,694,503	1,276,354	12,446,957	9,312,117	3,134,840
PUERTO RICO	104,500	63,100	NA	322,688	490,288	1,905,311	(1,415,023)
RHODE ISLAND	75,900	43,600	996,376	180,779	1,296,655	792,975	503,680
SOUTH CAROLINA	131,200	62,400	995,002	296,612	1,485,214	2,384,400	(899,186)
SOUTH DAKOTA	59,100	41,400	1,751,541	163,943	2,015,984	715,124	1,300,860
TENNESSEE	190,300	75,000	2,823,937	453,334	3,542,771	3,236,074	306,697
TEXAS	627,400	158,200	2,123,405	1,115,960	4,024,965	14,755,254	(10,730,289)
UTAH	86,300	48,000	1,507,763	236,963	1,879,026	1,179,905	699,121
VERMONT	60,900	39,800	1,125,537	152,163	1,378,400	478,677	899,723
VIRGIN ISLANDS	49,900	36,300	NA	86,026	172,226	925,173	(752,947)
VIRGINIA	198,300	81,500	2,807,470	524,767	3,612,037	5,132,923	(1,520,886)
WASHINGTON	138,100	71,100	3,337,271	450,376	3,996,847	3,054,255	942,592
WEST VIRGINIA	133,000	52,200	2,136,993	255,173	2,577,366	1,195,295	1,382,071
WISCONSIN	204,900	76,000	6,423,615	670,184	7,374,699	3,518,969	3,855,730
WYOMING	63,300	39,500	796,320	132,694	1,031,814	815,577	216,237
NATIONAL TOTAL	9,519,000	3,968,000	161,356.977	25,156,000	199,999,977	200,000,043	(66)

Following are the various allocation tables from which the compilation table was derived. The individual allocation tables are not available in standard format and are not required to answer the question, but are provided for continuity.

STATE	ALLOCATION RATIO	DISTRIBUTION OF $200,000,000.00
ALABAMA	0.01534512450	$3,069,024.90
ALASKA	0.00386926023	$773,852.05
AMERICAN SAMOA	0.00017810331	$35,620.66
ARIZONA	0.01025764719	$2,051,529.44
ARKANSAS	0.01272579770	$2,545,159.54
CALIFORNIA	0.09154432453	$18,308,864.91
COLORADO	0.01075233249	$2,150,466.50
CONNECTICUT	0.01698259040	$3,396,518.08
DELAWARE	0.00474777469	$949,554.94
DIST. OF COLUMBIA	0.00238877935	$477,755.87
FLORIDA	0.04420327312	$8,840,654.62
GEORGIA	0.02226890861	$4,453,781.72
GUAM	0.00147368165	$294,736.33
HAWAII	0.00687087703	$1,374,175.41
IDAHO	0.00410418057	$820,836.11
ILLINOIS	0.04593129565	$9,186,259.13
INDIANA	0.02463227660	$4,926,455.32
IOWA	0.01302980621	$2,605,961.24
KANSAS	0.01121023376	$2,242,046.75
KENTUCKY	0.01281856663	$2,563,713.33
LOUISIANA	0.02378606310	$4,757,212.62
MAINE	0.00735131456	$1,470,262.91
MARYLAND	0.01795490359	$3,590,980.72
MASSACHUSETTS	0.03473278036	$6,946,556.07
MICHIGAN	0.03407274419	$6,814,548.84
MINNESOTA	0.01735288297	$3,470,576.59
MISSISSIPPI	0.01365548081	$2,731,096.16
MISSOURI	0.01974472423	$3,948,944.85
MONTANA	0.00452621123	$905,242.25
NEBRASKA	0.00737427752	$1,474,855.50
NEVADA	0.00405057600	$810,115.20
NEW HAMPSHIRE	0.00466069401	$932,138.80
NEW JERSEY	0.03691432308	$7,382,864.62
NEW MEXICO	0.00655063871	$1,310,127.74
NEW YORK	0.07743502253	$15,487,004.51
NO. MARIANA ISLAND	0.00009212409	$18,424.82
NORTH CAROLINA	0.02244470625	$4,488,941.25
NORTH DAKOTA	0.00366530709	$733,061.42
OHIO	0.03757684000	$7,515,368.00
OKLAHOMA	0.01235066023	$2,470,132.05
OREGON	0.00976245384	$1,952,490.77
PENNSYLVANIA	0.04656058461	$9,312,116.92
PUERTO RICO	0.00952655624	$1,905,311.25
RHODE ISLAND	0.00396487514	$792,975.03
SOUTH CAROLINA	0.01192199923	$2,384,399.85
SOUTH DAKOTA	0.00357592087	$715,184.17
TENNESSEE	0.01618036977	$3,236,073.95
TEXAS	0.07377626591	$14,755,253.18
UTAH	0.00589952416	$1,179,904.83
VERMONT	0.00239338678	$478,677.36
VIRGIN ISLANDS	0.00462586316	$925,172.63
VIRGINIA	0.02566461699	$5,132,923.40
WASHINGTON	0.01527127344	$3,054,254.69
WEST VIRGINIA	0.00597647330	$1,195,294.66
WISCONSIN	0.01759484593	$3,518,969.19
WYOMING	0.00407738395	$815,476.79
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TOTALS	1.00000000000	$200,000,000.00
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1989 Weatherization State Allocation Report by Individual States

STATE	BASE AMOUNT	T&TA AMT.	TOTAL FUNDING
ALABAMA	1,315,702	115,785	1,431,486
ALASKA	1,310,711	115,536	1,426,246
ARIZONA	523,689	76,184	599,873
ARKANSAS	1,242,847	112,142	1,354,988
CALIFORNIA	4,005,940	250,297	4,256,237
COLORADO	3,395,595	219,780	3,615,374
CONNECTICUT	2,091,122	154,556	2,245,678
DELAWARE	434,843	71,742	506,585
DIST. OF COL	525,558	76,278	601,836
FLORIDA	456,930	72,846	529,776
GEORGIA	1,492,298	124,615	1,616,913
HAWAII	110,850	55,542	166,392
IDAHO	1,443,096	122,155	1,565,250
ILLINOIS	9,341,633	517,082	9,858,714
INDIANA	4,361,241	268,062	4,629,303
IOWA	3,661,129	233,056	3,894,185
KANSAS	1,655,179	132,759	1,787,937
KENTUCKY	2,899,260	194,963	3,094,222
LOUISIANA	623,808	81,190	704,997
MAINE	2,476,912	173,846	2,650,757
MARYLAND	1,957,773	147,889	2,105,661
MASSACHUSETT	5,053,145	302,657	5,355,802
MICHIGAN	10,348,131	567,407	10,915,537
MINNESOTA	7,698,536	434,927	8,133,463
MISSISSIPPI	837,586	91,879	929,465
MISSOURI	4,024,526	251,226	4,275,752
MONTANA	1,707,964	135,398	1,843,361
NEBRASKA	1,878,255	143,913	2,022,167
NEVADA	398,150	69,908	468,057
NEW HAMPSHIRE	1,239,179	111,959	1,351,137

NEW JERSEY	4,223,106	261,155	4,484,260
NEW MEXICO	1,176,372	108,819	1,285,190
NEW YORK	15,802,899	840,145	16,643,044
NORTH CAROLINA	2,416,064	170,803	2,586,866
NORTH DAKOTA	1,852,447	142,622	1,995,069
OHIO	8,677,325	483,866	9,161,191
OKLAHOMA	1,499,115	124,956	1,624,070
OREGON	1,971,813	148,591	2,120,403
PENNSYLVANIA	10,137,622	556,881	10,694,503
RHODE ISLAND	901,311	95,066	996,376
SOUTH CAROLINA	900,002	95,000	995,002
SOUTH DAKOTA	1,620,516	131,026	1,751,541
TENNESSEE	2,641,846	182,092	2,823,937
TEXAS	1,974,672	148,734	2,123,405
UTAH	1,388,346	119,417	1,507,763
VERMONT	1,024,321	101,216	1,125,537
VIRGINIA	2,626,163	181,308	2,807,470
WASHINGTON	3,130,734	206,537	3,337,271
WEST VIRGINIA	1,987,612	149,381	2,136,993
WISCONSIN	6,070,110	353,505	6,423,615
WYOMING	710,781	85,539	796,320
TOTAL FOR ALL STATES :	151,244,761	10,112,238	161,357,000

DISTRIBUTION OF ICP FUNDS - BASED ON $25.1 MILLION APPROPRIATION

STATE	TOTAL ALLOCATION	ADMIN*	GRANTS**
ALABAMA	362,098	30,000	332,098
ALASKA	145,214	30,000	115,214
AMERICAN SAMOA	84,060	30,000	54,060
ARIZONA	291,073	30,000	261,073
ARKANSAS	254,818	30,000	224,818
CALIFORNIA	1,334,987	66,749	1,268,238
COLORADO	404,917	30,000	374,917
CONNECTICUT	408,624	30,000	378,624
DELAWARE	128,753	30,000	98,753
DISTRICT OF COLUMBIA	132,594	30,000	102,594
FLORIDA	693,599	34,680	658,919
GEORGIA	461,631	30,000	431,631
GUAM	90,420	30,000	60,420
HAWAII	134,789	30,000	104,789
IDAHO	180,490	30,000	150,490
ILLINOIS	1,328,889	66,444	1,262,445
INDIANA	646,453	32,323	614,130
IOWA	426,911	30,000	396,911
KANSAS	312,288	30,000	282,288
KENTUCKY	402,018	30,000	372,018
LOUISIANA	357,043	30,000	327,043
MAINE	231,953	30,000	201,953
MARYLAND	455,785	30,000	425,785
MASSACHUSETTS	690,507	34,525	655,982
MICHIGAN	1,140,180	57,009	1,083,171
MINNESOTA	662,109	33,105	629,004
MISSISSIPPI	260,085	30,000	230,085
MISSOURI	566,360	30,000	536,360
MONTANA	176,400	30,000	146,400
NEBRASKA	256,589	30,000	226,589
NEVADA	155,231	30,000	125,231
NEW HAMPSHIRE	199,575	30,000	169,575
NEW JERSEY	795,636	39,782	755,854
NEW MEXICO	186,102	30,000	156,102
NEW YORK	1,890,531	94,527	1,796,004
NORTH CAROLINA	519,185	30,000	489,185
NORTH DAKOTA	173,719	30,000	143,719
NORTHERN MARIANAS	82,825	30,000	52,825
OHIO	1,188,904	59,445	1,129,459
OKLAHOMA	332,148	30,000	302,148
OREGON	292,291	30,000	262,291
PENNSYLVANIA	1,276,354	63,818	1,212,536
PUERTO RICO	322,688	30,000	292,688
RHODE ISLAND	180,779	30,000	150,779
SOUTH CAROLINA	296,612	30,000	266,612
SOUTH DAKOTA	163,943	30,000	133,943
TENNESSEE	453,534	30,000	423,534
TEXAS	1,115,960	55,798	1,060,162
UTAH	236,963	30,000	206,963
VERMONT	152,163	30,000	122,163
VIRGIN ISLANDS	86,026	30,000	56,026
VIRGINIA	524,767	30,000	494,767
WASHINGTON	450,376	30,000	420,376
WEST VIRGINIA	255,173	30,000	225,173
WISCONSIN	670,184	33,509	636,675
WYOMING	132,694	30,000	102,694
TOTAL	25,156,000	1,961,714	23,194,286

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* Amount available for State administrative expense grants.
** Amount available for grants to institutions.

State Allocation of Oil Overcharge Funds

Question: Would you tell the Subcommittee which States have fully committed all of their Stripper Well and Exxon overcharge funds that are presently available to them?

Answer: Following are lists of States which have fully committed all of their Exxon and Stripper Well oil overcharge funds. In the case of Exxon funds, "committed" means that the States have made final decisions regarding the funds, and that the funds are in a formally adopted spending plan at the State level. In the case of Stripper Well funds, "committed" means that the funds are in a formally adopted spending plan at the State level and that DOE has reviewed those plans and found them consistent with the terms of the Stripper Well Settlement Agreement.

The following States have fully committed all of their Exxon and Stripper Well oil overcharge funds:

Connecticut
Illinois
Maine
Maryland
Massachusetts
Michigan
Nevada
Oklahoma
Oregon
Wisconsin

In addition, the following States have fully committed all of their Exxon funds:

Alabama
Alaska
American Samoa
Arizona
Arkansas
Colorado
Georgia
Hawaii
Idaho
Indiana
Kansas
Louisiana
Minnesota
Mississippi
Montana
New Mexico
New York
Northern Marianas
North Dakota
Pennsylvania
Puerto Rico
Rhode Island
South Carolina
South Dakota
Tennessee
Utah
Vermont
Washington
Wyoming

Finally, the following States have committed all of their Stripper Well funds:

Iowa
Kentucky
West Virginia

Question: How will these States that have fully committed all of their overcharge receipts fund these State and Local Grant Programs as you propose?

Answer: Only 10 States have fully obligated all of their overcharge funds, in the sense that they have obtained DOE approval for specific annual expenditures. The Office of State and Local Assistance Programs (OSLAP) has been working with the States for the past several years assisting them in finding ways to identify and access alternate funding sources for these energy conservation activities-shared savings arrangements, private sector investment, and energy conservation programs implemented by utility companies. Increasingly utilities are designing and funding conservation programs. These programs allow the utilities to meet demand by utilization of both management techniques instead of by building more costly generating capacity. It is anticipated that, since energy conservation makes economic sense, once the oil overcharge funds are exhausted the States will be able to carry out their best energy conservation programs without federal funds. OSLAP will continue to support their efforts with technical assistance. In addition, it is estimated that the States will receive approximately $200 million in FY 1989 and FY 1990 under the terms of the Stripper Well Settlement Agreement, which will be available for use in these programs.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Electric and Hybrid Vehicle R&D

Question: Under the Test and Evaluation of Electric and Hybrid Vehicle R&D, does the reference to "test and evaluation in a cost-shared cooperative effort" include the Site Operators' User Task Force (present and future members)?

Answer: The activity described in this budget line item is intended for the Site Operators' User Task Force. The present Task Force members, the majority of which are from industry, are currently providing a very significant cost-share toward the field evaluation of new component and vehicle technologies. It could also involve future members. An effort will be made to establish cooperative efforts with the Electric Power Research Institute (EPRI) and some State and local governments to cost-share additional activities under the User Task Force.

Question: Must a "State and local government organization" be included in every expenditure made by DoE under the Test and Evaluation activity of the Electric and Hybrid Vehicle R&D budget request for FY'90? (DoE's budget descriptive language appears unclear and possibly susceptible to this interpretation.)

Answer: It is not intended that a State and local government organization be included in every expenditure made by DOE. As discussed in the above answer, an effort will be made to obtain funding support from State and local governments to help cost-share User Task Force activities in their areas.

INEL Dynamometer Testing

Question: Please provide for the record the amount necessary in FY90 for the dynamometer testing at INEL if Congress were to restore the Electric and Hybrid Vehicle R&D to the FY89 level?

Answer: The FY 1990 budget request includes $400,000 for limited laboratory characterization testing of the sodium-sulfur and zinc-bromine advanced battery systems. Under the lower budget request of $4,870,000 for the Electric and Hybrid Vehicle R&D program, the allocation of $400,000 for the dynamometer laboratory testing at INEL would be appropriate. If Congress restored the Electric and Hybrid Vehicle R&D budget to the FY 1989 level, the amount necessary to be added for INEL Laboratory Testing would be $1,500,000 or a total of $1,900,000.

Alternative Motor Fuels Act of 1988

Question: The Alternative Motor Fuels Act of 1988 was signed into law last October. The purpose of the Act is to encourage the production, development and widespread use of methanol, ethanol, and natural gas as transportation fuels by consumers.

In the FY90 budget, the Department has requested an additional $1.5 million to initiate demonstration projects as required in this Act (pg.

316, 322 and 323). In FY87, FY88, and FY89, the Department requested funds to collect and analyze data on Federal methanol-fueled vehicles. How will the demonstrations proposed for FY90 be different than demonstrations of these fuels in the past?

Answer: The past DOE demonstration activities involved a limited number of light duty vehicles operating on methanol only. The program covered by the Act involves light duty vehicles, heavy duty diesel vehicles, and transit buses operating on alcohol fuels and natural gas. In addition, the light duty vehicles to be demonstrated under the Act are to be of Original Equipment Manufacturer (OEM) types, and the methanol vehicles are to be of the flexible fueled variety capable of using either methanol or gasoline or combinations of both.

Question: Congress passes a lot of authorizations that go unfunded. Why did you decide to fund this one?

Answer: The Administration has been a strong supporter of alternative fuels for both energy and environmental concerns. This bill will provide data and incentives to help accelerate the commercialization of both alternative fuels and vehicles to use those fuels.

Question: What are your future funding plans?

Answer: A detailed program plan is being developed in coordination with the other government agencies involved which will include task descriptions, schedules, and resource requirements. This program plan will provide future funding needs in time for outyear budget preparations.

Steel Initiative

Question: In fiscal years 1986, 87, and 88, $13.1 million has been provided for what is commonly known as the "Steel Initiative." The April 1988 work plan for the initiative indicated that the intent of the research programs was to eliminate major unit operations from the current steelmaking flow sheets. Essentially, the effort was designed to "leapfrog" technology.

To date, only $5.3 million has been obligated and only $1.450 million has been obligated since February of 1988. The FY90 budget, however, includes an additional $1.0 million for this project.

What are your FY89 and FY90 plans to obligate the remaining $7.8 million?

Answer: All funds appropriated in FY 1986 through FY 1988 - a total of $13,134,000 - have been obligated, or will be during FY 1989. The following funds have been obligated.

Electromagnetic Casting	$2,184,000 (now terminated)
Superplastic Steel Technology	$1,500,000
Spray Forming of Steel	$1,450,000

The remaining $8 million has been set aside to initiate work on direct steelmaking in response to a proposal from the American Iron and Steel Institute. These funds will be obligated upon successful conclusion of negotiations, which should be by May 1989.

Question: What additional will be done with the $1.0 million requested in FY90 (pg. 301)?

Answer: The smelting pilot plant for the direct steelmaking project will be completed with this funding. This pilot unit will be constructed at Universal, PA, which is near Pittsburgh.

Question: Is DOE in the process of redrafting the research plan?

Answer: A new research plan, in response to The Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988 (P.L. 100-680) has been drafted. The draft plan was disseminated for review and comment on February 13, 1989.

Question: What is the necessary funding to complete the three approved projects?

Answer: Phase I of the superplastic steel project has been fully funded at $1.5 million. If a decision is made to proceed further, the cost of Phase II is projected to be $1.8 million. If funds are available, $1.1 million would be obligated in FY 1990 and $0.7 million in FY 1991.

Phase I of the steel spray forming project is projected to cost $5.65 million. $1.45 million has been obligated to date. Implementing the research plan as proposed would require $3.0 million in FY 1990 and $1.2 million in 1991. If a decision is made to proceed further, Phase II is projected to cost $16.4 million.

$8.0 million has been set aside for funding the direct steelmaking project proposed by the American Iron and Steel Institute. Although the American Iron and Steel Institute's proposal would require over $20 million through FY 1992, the specific amounts needed in the outyears cannot be precisely identified until the negotiations are completed. To complete the work being negotiated in accordance with the plan proposed, an additional $7.8 million would be required in FY 1990, $5.6 million in FY 1991 and $1,023,000 in FY 1992, for a total of $22,423,000.

Question: What would happen to the on-going projects if additional funds are not provided?

Answer: The superplastic steel technology project would be concluded after Phase I. The steel spray forming and direct steelmaking projects would be terminated in the middle of Phase I, and industry would have to decide about continuation with its own funds. Continuation by industry alone is not considered likely in either case.

Question: In December of 1987, the American Iron and Steel Institute decided to withdraw its support for the electromagnetic casting work at ANL. A DOE status report dated February, 1988, indicated that this work would be "closed out because industry cost-sharing is not available."

The February 1989 status report on this project seems to indicate that this project is going forward.

Has this project been discontinued or was the industry cost share replaced?

Answer: This project was terminated early in 1988. No DOE status report on the Steel Initiative has indicated that it is going forward.

Question: Was this project primarily funded because there was a cost-share?

Answer: The project was originally funded based on its strong congressional support, technical merit, potential benefits to the steel industry and the stated willingness of industry to share costs for the R&D.

Question: Does it still have the same merit?

Answer: The idea still has merit; however, industry has declined participation, citing large project costs, high risk and the extensive time required to successfully complete the work.

Steel and Aluminum Energy Conservation and Technologies

Question: Last year, Congress passed the Steel and Aluminum Energy Conservation and Technologies Act. The purpose of the Act is to increase the energy efficiency and enhance the competitiveness of American steel, aluminum, and copper industries and to continue the Steel Initiative.

What additional authorities were provided to DOE in this Act?

Answer: Under the new law, DOE may, for a period of up to 5 years, provide appropriate protections against the dissemination of information that: (a) results from research and development activities conducted under the Act; and (b) would be a trade secret or commercial or financial information. In addition, new funding levels for the program were authorized.

Question: How have you changed the scope of the Steel Initiative as a result of this Act?

Answer: The scope of the Steel Initiative has been expanded to include aluminum and other metals. Draft Management and Research Plans for the expanded program, which DOE is calling the Metals Initiative, have been published for comment. According to the law, final Management and Research Plans are to be completed by May 1989.

Ceramic Heat Exchangers

Question: The annual operating plan for the Industrial program indicates that in the middle of FY89, a decision will be made as to which of several attractive ceramic heat exchangers will be further developed. What is the status of this decision?

Answer: The decision was made to proceed with building a prototype of the B&W composite heat exchanger, utilizing the attractive sol-gel process.

Question: What are the funding requirements and FY90 plans for this effort?

Answer: No additional funds are required; FY 1989 funds will cover activities which will continue through FY 1990.

Question: Since the $1.5 million required in the FY90 budget (pg 297) is a reduction from the FY89 level of $2.2 million, will the work plan for this project need to be rewritten?

Answer: No. FY 1989 funds will adequately cover the planned activities for this composite heat exchanger project.

Buildings and Community Systems' Potential Savings

Question: Energy consumption in the buildings sector remained essentially constant in 1986 at 26.8 quads (pg. 255). Without significant additional gains in efficiency during the next two decades, you indicate that annual energy use in this sector is expected to exceed 38 quads in the year 2010.

The justification for FY90 indicates that while it is technically possible to reduce energy consumption in this sector by 17 quads by the year 2010, the economically achievable potential is approximately 11 quads.

Is the economically achievable goal of 11 quads by 2010 a reduction from base forecast of 26.8 quads, or from outyear forecast of 38 quads?

Answer: The estimated reduction of 11 quads by the year 2010 is from the forecast of 38 quads in 2010. Thus total energy consumed in the buildings sector would remain at about the current level.

Question: Can you differentiate between the technically feasible and economically feasible?

Answer: Technically achievable potential represents an upper limit of the energy savings that are possible given full adoption of all known, potentially cost-effective conservation techniques, including those still under development at DOE. Economically achievable potential, on the other hand, represents energy savings above current trends that could be obtained should an estimated half of the consumers adopt currently available cost effective technologies and anticipated technologies that are still under development.

Question: If the opportunity in this area is so great why were the priority projects in the Buildings and Community Systems program so far down the Energy Conservation priority list displayed at the FY89 hearing?

Answer: Because of the great need to constrain the Federal budget, it was not possible to give all promising projects a high priority. Also, the size of the opportunity is not the only factor to consider. In addition, priority is determined by considering how much impact the Federal activity would have on actually achieving the savings.

Question: Do the other energy sectors have more of an opportunity?

Answer: As part of the Conservation Multi-Year Plan for 1990-1994, the technically and economically achievable savings in 2010 compared to the forecast were estimated. They are:

	Economically Achievable	Technically Achievable
Buildings	11.2	17.8
Transportation	7.6	18.8
Industry	6.2	13.2

Question: You anticipate that the greatest increase in energy demand between the year 1986 and 2010 will be in space cooling (+62 percent) and in lighting (+55 percent).

Aren't these areas where we have made the greatest technological advances?

Answer: We have made great technological advances in these areas and great potential advances remain. The large increases in demand for space cooling and lighting are the result of large increases in forecast commercial sector growth. The commercial sector is a major user of space cooling and lighting. The forecast in demand only assumes a continuation of current efficiency trends; it does not take into account recent or future more efficient technologies.

Question: I note in your FY90 request that the statutory and regulatory programs are funded at about the FY89 levels while you are proposing large decreases in research areas. Specifically, the Community Systems program is proposed to decrease 84 percent and Technology and Consumer Products program is to decrease 66 percent.

Is the budget for the Buildings programs telling me that there is more opportunity for energy savings through regulations than through research?

Answer: No. The budget request for the statutory and regulatory programs are held nearly constant because that is the level of effort necessary to comply with Congressional mandates concerning these subjects. The budget requests for the research program are more discretionary, and in a tight budget situation the requests are necessarily less.

CFC Replacements

Question: In FY89, the Buildings and Community Systems program is developing a plan for Federal research on alternatives and substitutes for CFC-containing insulation (pg. 264). In addition, a report on a joint public/private workshop on alternatives to insulations containing CFC's will be published.

What funds have been identified in FY90 for this effort?

Answer: No funds have been identified in FY90 for this research. Consideration of priorities and budget constraints led to completion of ongoing projects related to vapor and air barriers, technology assessment, coatings, sealants, and laminated composites, reflective insulation, masonry, and wood products.

Least-Cost Utility Planning

Question: Funds have been added for at least three fiscal years in a row for what is commonly known as the Least-Cost Utility Planning program (pg. 280). One of the uses of these funds has been to develop a data base containing information on more than 110 major energy conservation programs carried out by 17 electric utilities in the Northeast U.S.

Why does this project continue to be such a low priority? Is the scope of the effort flawed? Is it repetitive?

Answer: The Department's efforts in Least-Cost Utility Planning (LCUP) have served as a catalyst for stimulating programs in this area by utilities, utility commissions and others. The Northeastern Data Exchange (NORDAX) is an outstanding example of a technology transfer activity in this program in which the grant by the Department provided about one fifth of the funds used in its first year. The remaining funds, including all of those for the second year, now in progress, have been provided by the utilities and other non-Federal participants.

We anticipate that several other programs in the Department will continue to perform research on energy efficiency that will provide results that will be useful to utilities and utility regulators. In view of this, and the willingness of utilities and utility organizations to provide support. LCUP does not warrant a high priority within the FY 1990 budget limitations.

Energy Conversion and Utilization Technologies

Question: The primary mission of the Energy Conversion and Utilization Technologies (ECUT) program is to expand the generic technology base that supports initiatives by both the DOE Conservation programs and U.S. private industry to improve the efficiency of energy conservation and utilization systems. In FY 89 this program was increased from the FY 88 level of $20.4 million to $22.9 million. The FY 90 request is $17.8 million. What is the optimum funding level for this program? What was your request to OMB for this program? What are your FY 89 plans for the additional $2.5 million?

Answer: The optimum funding level for the ECUT program would be which is requested in the President's budget. The FY 1990 request to OMB for this program was $17.8 million. FY 1989 plans for the additional $2.5 million include: $100,000 to partially compensate for the effects of inflation on the ECUT Combustion research program; $800,000 for new initiatives in the ECUT Thermal Sciences program for approaches circumventing the use of chlorofluorocarbon working fluids in energy conversion systems; $400,000 for electrochemical materials processing as directed by Congress; $1,000,000 for research on chemical vapor composite (CVC) processing of ceramic composites as directed by Congress; and $200,000 to compensate for the effects of inflation on the ECUT Biocatalysis Program.

Inventors Program

Question: The Energy-Related Inventions Program evaluates and supports promising energy-related inventions and concepts. According to the justification (pg. 339), from program inception in 1974 through 1987, more than 24,000 inventions have been evaluated and 280 grants awarded totaling $20.2 million. Of these, 73 inventions entered the marketplace, generating sales in excess of $225 million. Are there any opportunities to recover some of the funding if an invention is a commercial success?

Answer: Unlike programs in some foreign countries, the Energy-Related Inventions Program neither takes a position in the ownership of intellectual property nor recovers the costs of assisting an inventor or small business in attempting to commercialize energy-related technology. Since successful commercialization of a technology can easily take 10 years, attempting to recover costs over a long time would be very costly to the Government. In addition, the Government support is usually an extremely small percentage of the entire financial portfolio required to bring the invention to the marketplace. The program costs can be recouped instead from the taxes paid by the successful business and the employment opportunities it offers to the private sector. Because we have no financial stake in the grant, the inventors we have supported have freely offered us information, both financial and technical, that has enabled us to conduct detailed, thorough studies of the invention process itself. The studies are used to improve the program and make it more responsive to the needs of the inventor community.

State and Local Programs

Question: Since 1983 states have received $3.5 billion in petroleum overcharge funds. Generally, these funds can only be used in one or more of the five federal energy-related programs and only if a state has an approved DOE plan.

Of the $3.5 billion, about $2.5 billion has been approved for expenditure. This leaves about a billion that is still unapproved.

Can you briefly explain DOE's approval process?

Answer: Under DOE's approval process state plans for use of Exxon oil overcharge funds are reviewed and approved in the same manner as Federal appropriations for these programs--the plans are approved by DOE's field offices, with policy guidance from headquarters. State Exxon projects are then subject to the same program reporting requirements and monitoring procedures followed for appropriated funds. State plans for use of Stripper Well funds are reviewed at headquarters for consistency with the Stripper Well Settlement Agreement by a committee comprised of CE staff, staff from the Office of the General Counsel, and staff from the Economic Regulatory Administration. States also must submit annual reports to DOE and the Courts concerning the manner in which Exxon and Stripper Well funds have been used during the year. In addition, quarterly reports on the status of oil overcharge funds are submitted to the Congress.

Question: What, if anything, is holding up the approval of these funds?

Answer: The use of the funds for which the states have requested approval is not being held up by either DOE or the states. Plans are developed by the states, in many of which the allocation of overcharge funds requires an action by the state legislature. The plans are reviewed and approved by the DOE following established guidelines and time frames. The states may schedule plan development, allocation, and submission for program funding approval over a period of time. Plans for the use of Exxon funds are submitted and approved during the year in which the funds are to be obligated; planned obligations for next year will be approved at that time.

Question: For the past three fiscal years, part of the four DOE energy conservation programs have been funded through the use of overcharge funds as authorized in the Petroleum Overcharge Distribution and Restitution Act (PODRA). These funds are added to the appropriated amount to bring the annual total to $200 million. Do you anticipate any additional PODRA funds to be available in FY90?

Answer: PODRA funds available to the states in FY90 are estimated to be $40.3 million.

Brandeis University Facility

Question: In FY89, a $3.0 million grant was provided to Brandeis University for an energy and natural resources technology development center. What is the status of this grant?

Answer: The Conservation program has prepared an authorization directing the Chicago Operations Office to issue a grant for the Brandeis University energy and natural resources technology development center. This action is undergoing legal review by the Office of General Counsel. Approval of General Counsel is required for all actions other than full and open competition.

Conservation's request to the Assistant Secretary for Management and Administration that title to the facility be vested in the university, rather than retained by DOE, is also undergoing review by the Office of General Counsel. If this request is approved, the determination to vest title in the university will be sent immediately to the appropriate Congressional committees for approval. Following approval by the committees, a grant can be issued for construction of the Brandeis facility.

Northwestern University Facility

Question: In FY 89, a $10.0 million grant was provided to Northwestern University for a building. What is the status of this grant?

Answer: A total of $16 million has been made available for the Northwestern University facility from FY 1988 and FY 1989 appropriations. Environmental clearance for the project was established in December 1988 and construction was begun in that month. The site on the Northwestern campus is land which has been reclaimed from Lake Michigan. The last of 100 caisons are being finished. Existing service roads and utilities have been rerouted. Bids have been solicited for excavation and construction of the facility's substructure. A four story, rectangular structure is planned. The facility is expected to be complete by May 1991.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

Funding for State and Local Assistance Programs

Question: What is the status in the President's budget of the funding for the State and Local Assistance Program of the Department of Energy?

Answer: The President's FY 1990 Budget Request for the Office of State and Local Assistance Programs (OSLAP) is $7.6 million in program direction funds. No grant funds are requested.

Question: If this funding level is below the current services level of approximately $208 million, how does the Department propose that the States will make up the difference, given roughly constant demand? In past years, the Department has argued that the States could use Oil Overcharge funds to make up for federal cuts in the State and Local Assistance Programs. It is my understanding that the bulk of these Overcharge monies have been exhausted by the States. Does the Department take the same position this Fiscal Year, and if so, with what does it support that position?

Answer: Although the States have committed $1.9 billion of the Exxon funds, approximately $600 million has not been obligated, in the sense that the States have not yet obtained DOE approval for specific yearly expenditures. The States must use these funds for the grant programs and the Low-Income Home Energy Assistance Program. For Stripper Well funds $168 million has not been allocated by the States. DOE does not have information on actual obligations of Stripper Well funds. Under the Stripper Well Settlement States are merely required to report intended use of the funds not actual expenditures. The outlay rate of these funds is not clear. It is not unreasonable to assume a two to three year outlay rate for some projects. During FY 1989 and FY 1990, it is estimated that the States will receive approximately $200 million under the terms of the Stripper Well Settlement Agreement, which will be available for use in these energy conservation programs.

Question: For instance, the DOE Weatherization program has been at the heart of a fairly large national investment in weatherizing homes of lower income people. In my home state, Oil Overcharge funds are almost depleted. What sources for making up the difference caused by a loss of DOE funding would the Department recommend?

Answer: The Office of State and Local Assistance Programs (OSLAP) has been working with the States for the past several years assisting them in finding ways to identify and access alternate funding sources for these energy conservation activities-shared savings arrangements, private sector investment, and the like. It is anticipated that, since energy conservation makes economic sense, once the oil overcharge funds are exhausted the States will be able to carry out their best energy conservation programs without federal funds. OSLAP will continue to support their efforts with technical assistance. Under the terms of the Stripper Well settlement, States have more discretion than under the Exxon decision in the uses that the funds may be put to. To date, States have allocated only $85 million to the Weatherization Assistance Program, while they have allocated $527 million to energy-related activities falling outside of the DOE grant programs and the Low-Income Home Energy Assistance Program. Such activities include traffic light synchronization and road and bridge repair projects. The high priority States give to projects such as these indicate that they perceive little need for weatherization activities.

Least-Cost Utility Planning

Question: The Department recently issued a Request for Proposals and accepted proposals for $700,000 in funding for a demand-based conservation demonstration program for rural northeastern utilities. When do you anticipate that awards will be made? How many grantees do you anticipate?

Answer: We anticipate that the awards will be made in the spring of 1989. At this stage of the proposal review it is not yet certain how many grants will be made.

Question: If the results of the demonstration project/s are useful, does the Department have plans for a longer term initiative in the area of demand-based residential and commercial conservation? If so, how would you characterize these plans?

Answer: The Department's efforts in Least-Cost Utility Planning (LCUP) have served as a catalyst for stimulating programs in this area by utilities, utility commissions and others. We feel that our current efforts will complete our role as a catalyst and, therefore, do not at this time, have plans for further LCUP activities. We should also note that many utilities in the Northeast, such as Narragansett Electric, Massachusetts Electric, and Granite State Electric, have adopted some aggressive and forward-looking programs without the need for any federal funding.

QUESTIONS SUBMITTED BY SENATOR DALE BUMPERS

State and Local Programs

Question: How much petroleum overcharge money do the States have left to obligate? Please provide for the record a State-by-State breakdown showing total moneys received from petroleum overcharge cases, how much of that money has been obligated and how the money was allocated among the five energy conservation programs (including LIHEAP). In addition show the annual appropriations for state and local grants and how thsoe were allocated in FY 1988 and FY 1989.

Answer: The States have received a total of $3.1 billion in Exxon and Stripper Well oil overcharge funds. Of that total:

- the States have committed $2.8 billion (90.3%) to formally adopted state-level spending plans;
- the States have submitted plans to DOE and HHS covering $2.4 billion (77.4%)

- DOE and HHS have approved $2.3 billion (74.2%) for expenditure. (These federally approved funds are considered to be "obligated.")

However, DOE and HHS have no control over the rate at which States expend these approved funds. In some cases the funds may not be expended for two to three years. Attached are two tables providing the state-by-state information requested. The first table shows State-by-State Exxon funds received, allocated and approved, or obligated, for each of the five conservation programs. The second table shows State-by-State Stripper Well funds received and allocated among the five conservation programs and "other" conservation activities, as permitted under the Stripper Well Settlement Agreement. Funding levels shown on the Stripper Well table refer to State plans which DOE has reviewed and found consistent with the terms of the Agreement. DOE does not have information on State obligation of Stripper Well funds.

EXXON FUND ALLOCATIONS AND APPROVALS -- 3/7/89

STATE	EXXON DISBURSEMENT	SECP ALLOCATED	SECP OBLIGATED	EES ALLOCATED*	EES OBLIGATED	ICP ALLOCATED	ICP OBLIGATED	WAP ALLOCATED	WAP OBLIGATED	LIHEAP ALLOCATED	TOTAL ALLOCATED	TOTAL APPROVED
ALABAMA	$32,192,086	$6,755,000	$6,755,000	$3,250,000	$2,298,000	$12,138,197	$7,353,000	$5,852,338	$2,900,000	$5,509,465	$33,505,000	$19,306,000
ALASKA	$8,272,460	$2,418,289	$256,040	$1,333,484	$1,333,484	$900,000	$900,000	$6,300,000	$4,000,000	$0	$10,951,773	$6,489,524
AMERICAN SAMOA	$371,276	$393,947	$300,000	$0	$0	$0	$0	$0	$0		$393,947	$300,000
ARIZONA	$21,565,620	$15,861,132	$16,149,279	$1,025,000	$886,000	$1,500,000	$451,911	$4,000,000	$2,000,000	$1,500,000	$23,886,132	$19,487,190
ARKANSAS	$25,949,670	$3,130,501	$3,130,501	$6,440	$6,440	$18,850,000	$13,105,358	$2,500,000	$2,500,000	$3,700,000	$28,186,941	$18,742,295
CALIFORNIA	$194,717,035	$69,758,989	$41,844,453	$14,000,000	$12,297,499	$0	$0	$30,000,000	$10,395,065	$10,000,000	$123,758,989	$64,537,017
COLORADO	$22,715,884	$20,615,540	$18,056,505	$0	$0	$0	$0	$5,554,476	$5,554,476		$26,170,016	$23,610,981
CONNECTICUT	$34,900,269	$6,400,000	$1,730,000	$0	$3,000,000	$1,000,000	$1,000,000	$0	$0	$27,500,269	$34,900,269	$5,730,000
DELAWARE	$9,944,770	$103,548	$103,548	$889,756	$39,756	$4,483,334	$3,349,305	$2,000,000	$2,000,000	$96,827	$7,573,465	$5,492,609
DISTRICT OF COLUMBIA	$4,603,516	$1,231,000	$774,809	$0	$220,503	$400,000	$400,000	$1,042,857	$900,000	$1,068,587	$3,742,444	$2,295,312
FLORIDA	$98,114,524	$18,059,000	$18,059,000	$2,003,000	$2,003,000	$66,000,000	$38,866,000	$302,300	$217,000		$86,364,300	$59,145,000
GEORGIA	$46,625,491	$1,505,000	$1,505,000	$2,425,000	$2,425,000	$16,000,000	$15,847,000	$11,998,000	$11,998,000	$21,000,000	$52,928,000	$31,775,000
GUAM	$3,099,681	$305,214	$305,214	$0	$0	$0	$0	$0	$0		$305,214	$305,214
HAWAII	$14,482 090	$8,446,772	$7,343,772	$1,513,028	$1,333,622	$4,250,000	$4,250,000	$1,600,000	$1,600,000		$15,809,800	$14,527,394
IDAHO	$8,690,739	$3,925,280	$3,925,280	$0	$0	$1,000,000	$898,143	$3,334,514	$3,334,514	$0	$8,259,794	$8,157,937
ILLINOIS	$96,105,506	$12,585,133	$12,585,133	$0	$0	$0	$0	$62,550,000	$37,000,000	$40,000,000	$115,135,133	$49,585,133
INDIANA	$51,631,388	$19,087,805	$8,782,963	$0	$10,000,000	$412,212	$206,106	$13,671,839	$6,171,839	$19,672,845	$52,844,701	$25,160,908
IOWA	$27,423,669	$10,975,000	$9,343,785	$5,353,134	$5,353,134	$0	$0	$4,769,395	$4,769,395	$0	$21,097,529	$19,466,314
KANSAS	$23,958,453	$5,587,444	$2,044,035	$292,617	$231,621	$9,574,809	$4,249,644	$3,191,768	$993,716	$10,836,459	$29,483,097	$7,519,016
KENTUCKY	$27,438,633	$0	$0	$0	$0	$0	$0	$5,249,000	$5,249,000	$2,587,345	$7,836,345	$5,249,000
LOUISIANA	$51,536,267	$4,119,230	$0	$0	$0	$30,000,000	$5,019,229	$21,536,267	$10,000,000	$0	$55,655,497	$15,019,229
MAINE	$15,094,373	$7,725,000	$6,700,000	$0	$250,000	$1,000,000	$1,000,000	$7,600,000	$4,800,000	$200,000	$16,525,000	$12,750,000
MARYLAND	$36,415,979	$3,000,000	$935,178	$0	$2,113,596	$3,349,305	$3,335,429	$30,000,000	$23,688,677	$4,300,000	$40,649,305	$30,072,880
MASSACHUSETTS	$70,340,939	$21,700,000	$21,700,000	$0	$0	$0	$0	$52,000,000	$28,732,882	$0	$73,700,000	$50,432,882
MICHIGAN	$70,991,490	$18,683,000	$17,229,300	$0	$0	$0	$0	$15,966,200	$12,988,700	$46,028,000	$80,677,200	$30,218,000
MINNESOTA	$36,066,225	$18,298,589	$18,298,589	$1,268,038	$1,268,038	$0	$0	$9,500,000	$5,500,000	$5,500,000	$34,566,627	$25,066,627
MISSISSIPPI	$28,378,643	$10,711,000	$10,711,000	$1,126,000	$1,126,000	$11,092,000	$11,092,000	$5,700,000	$5,700,000	$2,000,030	$30,629,030	$28,629,000
MISSOURI	$41,516,281	$8,870,166	$8,870,166	$550,773	$550,773	$10,952,887	$10,952,887	$14,332,528	$14,332,528	$3,100,000	$37,806,354	$34,706,354
MONTANA	$9,584,666	$2,905,439	$1,862,150	$235,000	$152,962	$938,957	$938,957	$4,866,000	$4,446,000	$1,650,000	$10,595,396	$7,400,069
NEBRASKA	$15,504,944	$3,328,556	$2,242,589	$3,309,795	$1,724,861	$0	$0	$0	$0	$0	$6,638,351	$3,967,450

*In some cases, States report EES allocations in combination with SECP.

STRIPPER WELL FUNDS ALLOCATIONS--3/7/89

STATE	STRIPPER WELL FUNDS RECEIVED	SECP ALLOCATED	EES ALLOCATED	ICP ALLOCATED	WAP ALLOCATED	LIHEAP ALLOCATED	OTHER ALLOCATED	TOTAL ALLOCATED
ALABAMA	$15,442,300	$96,600	$627,900	$394,296	$0	$2,270,000	$11,430,000	$14,818,796
ALASKA	$3,893,914	$0	$0	$0	$0	$0	$0	$0
AMERICAN SAMOA	$179,238	$0	$0	$0	$0	$0	$0	$0
ARIZONA	$10,323,006	$90,000	$0	$0	$0	$75,000	$3,353,000	$3,518,000
ARKANSAS	$12,906,883	$0	$0	$0	$2,926,858	$1,380,000	$6,422,733	$10,729,591
CALIFORNIA	$92,127,623	$0	$1,000,000	$0	$0	$0	$79,554,700	$80,554,700
COLORADO	$10,820,844	$3,417,650	$0	$0	$0	$0	$6,450,056	$9,867,706
CONNECTICUT	$17,090,800	$3,100,074	$400,000	$1,000,000	$1,000,000	$3,118,503	$9,650,000	$18,268,577
DELAWARE	$4,778,026	$0	$0	$0	$2,500,000	$0	$1,573,750	$4,073,750
DISTRICT OF COLUMBIA	$2,404,000	$787,044	$0	$0	$409,984	$898,553	$86,554	$2,182,135
FLORIDA	$46,497,468	$0	$0	$0	$13,250,000	$0	$20,830,000	$34,080,000
GEORGIA	$22,410,801	$150,000	$516,122	$100,000	$0	$450,000	$18,658,890	$19,875,012
GUAM	$1,483,082	$0	$65,029	$0	$0	$0	$0	$65,029
HAWAII	$6,914,657	$0	$0	$0	$0	$0	$0	$0
IDAHO	$13,609,470	$500,000	$0	$0	$0	$0	$2,865,000	$3,365,000
ILLINOIS	$46,223,954	$0	$0	$0	$4,550,000	$11,500,000	$30,421,000	$46,471,000
INDIANA	$24,789,228	$50,000	$400,000	$0	$2,282,693	$0	$20,103,410	$22,836,103
IOWA	$13,112,829	$230,000	$15,770,000	$0	$0	$5,400,000	$2,480,000	$23,880,000
KANSAS	$11,281,663	$170,000	$0	$0	$106,000	$0	$2,676,397	$2,952,397
KENTUCKY	$12,900,243	$0	$0	$0	$0	$13,230,846	$0	$13,230,846
LOUISIANA	$23,937,622	$0	$0	$0	$0	$0	$16,500,000	$16,500,000
MAINE	$7,398,155	$950,000	$350,000	$600,000	$3,125,000	$1,800,000	$505,000	$7,330,000
MARYLAND	$18,018,989	$918,500	$4,970,000	$3,125,000	$5,065,300	$4,539,109	$1,180,394	$19,798,303
MASSACHUSETTS	$34,450,903	$13,500,000	$0	$2,000,000	$0	$17,000,000	$6,500,000	$39,000,000
MICHIGAN	$34,289,848	$1,500,000	$0	$0	$3,717,257	$19,177,000	$19,268,259	$43,662,516
MINNESOTA	$17,463,451	$0	$0	$0	$8,320,000	$0	$8,459,000	$16,779,000
MISSISSIPPI	$13,742,490	$1,663,227	$0	$5,070,000	$1,250,000	$1,000,000	$3,300,000	$12,283,227
MISSOURI	$19,760,533	$500,000	$0	$0	$2,863,614	$2,079,183	$8,570,700	$14,013,497
MONTANA	$4,555,051	$338,000	$0	$0	$850,000	$0	$2,476,042	$3,664,042
NEBRASKA	$7,421,265	$0	$0	$0	$600,000	$0	$0	$600,000

EXXON FUND ALLOCATIONS AND APPROVALS -- 3/7/89

STATE	EXXON DISBURSEMENT	SECP ALLOCATED	SECP OBLIGATED	EES ALLOCATED*	EES OBLIGATED	ICP ALLOCATED	ICP OBLIGATED	WAP ALLOCATED	WAP OBLIGATED	LIHEAP ALLOCATED	TOTAL ALLOCATED	TOTAL APPROVED
NEVADA	$8,767,275	$1,416,595	$1,416,595	$1,839,018	$744,332	$215,077	$215,077	$3,432,842	$1,984,274	$4,999,695	$11,903,227	$4,360,278
NEW HAMPSHIRE	$9,797,537	$4,438,000	$4,438,000	$3,628,986	$3,628,986	$79,088	$79,088	$893,400	$660,000	$0	$9,039,474	$8,806,074
NEW JERSEY	$75,432,932	$4,000,000	$4,000,000	$0	$0	$18,972,706	$18,972,706	$0	$0	$0	$22,972,706	$22,972,706
NEW MEXICO	$13,692,730	$4,998,500	$3,280,018	$0	$588,226	$4,268,922	$798,235	$5,337,525	$3,777,544	$0	$14,604,947	$8,444,023
NEW YORK	$159,874,589	$72,569,092	$72,569,092	$12,495,399	$12,495,399	$38,000,000	$22,796,867	$37,455,127	$37,455,127	$17,500,000	$178,019,618	$145,316,485
NORTHERN MARIANAS	$192,062	$199,670	$199,670	$0	$0	$0	$0	$0	$0	$0	$199,670	$199,670
NORTH CAROLINA	$47,029,797	$5,850,000	$5,850,000	$1,460,000	$1,460,000	$2,500,000	$2,496,000	$7,400,000	$7,400,000	$3,640,000	$20,850,000	$17,206,000
NORTH DAKOTA	$7,721,443	$1,449,536	$1,306,037	$128,017	$24,458	$2,718,000	$1,582,286	$1,364,447	$2,382,595	$2,800,000	$8,460,000	$5,295,376
OHIO	$79,740,285	$5,390,706	$5,390,706	$1,869,389	$1,869,389	$3,114,486	$3,114,486	$51,101,669	$34,584,759	$10,000,000	$71,476,250	$44,959,340
OKLAHOMA	$26,234,258	$13,373,930	$7,012,643	$0	$1,727,780	$4,000,000	$1,593,981	$5,305,776	$5,196,631	$5,037,708	$27,717,414	$15,531,035
OREGON	$20,721,692	$6,525,827	$6,525,827	$311,900	$311,900	$103,654	$103,564	$14,446,512	$12,446,512	$238,418	$21,626,311	$19,387,803
PENNSYLVANIA	$96,803,642	$5,918,000	$5,917,855	$600,000	$799,993	$5,760,627	$5,760,627	$19,082,000	$16,082,000	$62,066,000	$93,626,627	$28,560,475
PUERTO RICO	$20,053,[illegible]49	$150,000	$150,000	$0	$0	$1,850,000	$1,850,000	$0	$0	$20,000,000	$22,000,000	$2,000,000
RHODE ISLAND	$8,005,286	$3,515,000	$3,145,419	$400,000	$1,045,270	$1,500,000	$1,000,000	$1,340,000	$893,400	$1,250,000	$8,005,000	$6,084,089
SOUTH CAROLINA	$25,187,597	$7,484,000	$1,179,000	$6,364,000	$0	$8,344,000	$1,750,000	$8,400,000	$2,900,000	$4,000,000	$34,592,000	$5,829,000
SOUTH DAKOTA	$7,501,993	$8,700,047	$8,700,047	$232,000	$232,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,614,707	$12,546,754	$10,932,047
TENNESSEE	$34,603,234	$3,076,000	$3,076,000	$4,500,000	$230,000	$10,000,000	$9,918,000	$22,500,000	$22,500,000	$2,000,000	$42,076,000	$35,724,000
TEXAS	$157,187,087	$112,820,000	$36,632,221	$6,000,000	$4,515,720	$8,000,000	$1,621,400	$7,000,000	$3,500,000	$4,000,000	$137,820,000	$46,269,341
UTAH	$12,454,478	$7,100,000	$3,436,000	$0	$150,000	$2,250,000	$1,223,399	$7,000,000	$4,000,000	$0	$16,350,000	$5,809,399
VERMONT	$5,005,194	$2,300,000	$1,950,000	$0	$0	$0	$0	$2,558,000	$1,758,000	$365,000	$5,223,000	$3,708,000
VIRGIN ISLANDS	$9,951,205	$547,088	$1,208,000	$0	$874,000	$0	$0	$0	$0	$0	$547,088	$2,082,000
VIRGINIA	$53,376,861	$6,187,644	$6,187,644	$539,813	$539,813	$1,835,835	$1,835,835	$15,500,000	$10,200,000	$6,150,000	$30,213,292	$18,763,292
WASHINGTON	$32,121,634	$17,376,075	$15,324,997	$0	$452,556	$0	$0	$15,192,831	$8,744,019	$1,335,237	$33,904,143	$24,521,572
WEST VIRGINIA	$12,902,925	$2,543,260	$2,543,260	$0	$274,960	$471,499	$471,499	$3,537,668	$2,183,846	$5,000,000	$11,552,427	$5,473,565
WISCONSIN	$36,966,569	$0	$0	$0	$0	$0	$0	$17,700,000	$10,700,000	$23,337,517	$41,037,517	$10,700,000
WYOMING	$8,874,386	$5,000,000	$0	$0	$0	$2,000,000	$101,980	$2,000,000	$2,000,000	$0	$9,000,000	$2,101,980
TOTAL	$2,098,433,207	$609,414,544	$442,982,320	$79,149,587	$80,579,071	$310,825,595	$201,499,999	$574,965,279	$404,120,499	$381,584,108	$1,955,939,1[illegible]4	$1,129,181,889

*In some cases, States report EES allocations in combination with SECP.

STRIPPER WELL FUNDS ALLOCATIONS--3/7/89

STATE	STRIPPER WELL FUNDS RECEIVED	SECP ALLOCATED	EES ALLOCATED	ICP ALLOCATED	WAP ALLOCATED	LIHEAP ALLOCATED	OTHER ALLOCATED	TOTAL ALLOCATED
NEVADA	$4,076,385	$0	$0	$0	$0	$485,000	$5,865,000	$6,350,000
NEW HAMPSHIRE	$4,690,381	$391,568	$0	$0	$982,170	$0	$2,800,000	$4,173,738
NEW JERSEY	$37,150,035	$0	$0	$0	$0	$0	$25,775,000	$25,775,000
NEW MEXICO	$6,592,378	$0	$0	$1,100,000	$100,000	$0	$7,800,000	$9,000,000
NEW YORK	$77,928,420	$3,250,000	$0	$8,000,000	$0	$7,569,468	$46,250,000	$65,069,468
NORTHERN MARIANAS	$92,711	$0	$0	$0	$0	$0	$25,275	$25,275
NORTH CAROLINA	$22,587,719	$0	$0	$0	$0	$4,000,000	$17,916,763	$21,916,763
NORTH DAKOTA	$3,688,662	$0	$0	$0	$0	$1,000,000	$4,500,000	$5,500,000
OHIO	$37,816,271	$0	$327,000	$0	$8,900,000	$3,400,000	$24,622,457	$37,249,457
OKLAHOMA	$12,429,356	$319,419	$0	$0	$618,000	$675,000	$11,873,900	$13,486,319
OREGON	$9,975,614	$0	$0	$0	$600,000	$0	$10,334,319	$10,934,319
PENNSYLVANIA	$46,857,258	$2,429,000	$1,389,000	$2,306,000	$0	$14,394,000	$770,000	$21,288,000
PUERTO RICO	$9,587,257	$0	$0	$0	$0	$0	$0	$0
RHODE ISLAND	$3,990,138	$522,000	$158,000	$0	$0	$2,500,000	$162,000	$3,342,000
SOUTH CAROLINA	$11,997,963	$4,841,280	$1,687,031	$0	$74,000	$0	$3,563,652	$10,165,963
SOUTH DAKOTA	$3,598,404	$141,750	$0	$0	$0	$0	$2,754,271	$2,896,021
TENNESSEE	$16,283,467	$2,000,000	$0	$0	$0	$0	$2,600,000	$4,600,000
TEXAS	$74,246,354	$248,733	$0	$460,823	$0	$7,351,000	$44,419,732	$52,480,288
UTAH	$5,937,114	$250,000	$0	$0	$0	$25,000	$4,865,000	$5,140,000
VERMONT	$2,408,637	$0	$0	$0	$550,000	$800,000	$252,400	$1,602,400
VIRGIN ISLANDS	$4,655,338	$0	$0	$0	$0	$0	$0	$0
VIRGINIA	$25,828,146	$0	$0	$0	$20,000,000	$0	$800,000	$20,800,000
WASHINGTON	$15,368,578	$511,867	$0	$0	$0	$1,916,408	$11,259,701	$13,687,976
WEST VIRGINIA	$6,014,554	$0	$0	$0	$250,000	$250,000	$5,874,136	$6,374,136
WISCONSIN	$17,706,956	$5,028,808	$2,000,000	$1,155,059	$0	$3,101,000	$6,900,000	$18,184,867
WYOMING	$4,103,867	$1,200,000	$140,000	$0	$262,500	$150,000	$1,640,000	$3,392,500
TOTAL	$1,015,760,899	$49,095,520	$29,800,082	$25,311,178	$85,153,376	$131,535,070	$523,938,491	$847,833,717

Appeals

Question: Regarding the DOE process of approving state energy grants, do you support providing States with an appeal from DOE's various Support Offices to the Washington Office of State and Local Assistance Programs (OSLAP)?

Answer: DOE's Support Offices have the day-to-day responsibility for liaison with states, and state plan review and approval. The staff at DOE's Support Offices which support OSLAP have years of experience with these programs, and are knowledgeable and professional in carrying out their responsibilities. OSLAP's headquarters staff support the field offices, setting national policy, providing information and training as necessary. Field office staff involve headquarters personnnel when new policy or procedural questions arise, or as otherwise necessary. DOE is prsently reviewing the appeals process matter.

Global Warming

Question: Global change research - The FY90 budget includes a report by the Committee on Earth Sciences entitled Our Changing Planet: A U.S. Strategy for Global Change Research. That booklet indicated a budget of $27.2 million for the global change program at the Department of Energy.

Please specify the activities that are included in the $27.2 million budget.

Answer: The following table shows the activities that are included in the $27.2 million for the DOE global change program.

DOE FOCUSED GLOBAL CHANGE PROGRAM

Biogeochemical Dynamics - $5.5 million
- Global carbon cycle and atmospheric CO2 change
- Long-term change of precipitation chemistry and aerosols

Ecological System/Dynamics - $6.7 million
- Direct effect of CO2/climate with vegetation/ecosystems
- Theory of biological/physical systems

Climate/Hydrology Systems - $10.2 million
- Response of climate systems to CO2/methane; climate diagnostics; regional climate change

Human Interactions - $3.6 million
- Estimate future CO2 emissions from energy sources
- Energy technology/options for mitigating CO2 emissions

Solar Influence - $1.2 million
- Energy relationships of earth/sun

Question: How much of the budget falls within energy conservation?

Answer: None of the $27.2 million for DOE global change activities is included in the energy conservation budget. The $27.2 million is included in the Biological and Environmental Research program ($26 million) and the Basic Energy Sciences program ($1.2 million). Both of these programs are under the aegis of the Director, Office of Energy Research. This research is aimed at understanding the science and phenomenology of global warming. It is intended to understand if there is a problem and what the scope of the problem will be. It is not researching options for addressing solutions.

Question: Please provide for the record a summary of all DOE activities related to the greenhouse effect, ozone depletion, carbon dioxide emissions and global change which are being undertaken in FY 1989 and proposed for FY 1990 and which are not included in the global change program mentioned above.

Answer: Other than the global change budget of $27.2 million mentioned above, the Office of Energy Research funds research on stratospheric atmospheric chemistry which relates to ozone depletion. The funding for this research is approximately $300,000 annually and is included in the Basic Energy Sciences program. The other Department of Energy activities are in the Office of Environment, Safety and Health which conducts Congressionally mandated studies on CO_2. These studies, budgeted at $3.0 million in FY 1989, and $1.1. million in FY 1990, are expected to contribute to identifying and assessing technology development and energy policy options for the U.S. in the future.

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Low-Income Weatherization

Question: Since the program's inception, how much money has the DOE spent on State and local assistance programs for low-income weatherization? How much of that has not been spent on actual dwelling weatherization, but rather on such items as administrative costs and training?

Answer: Approximately $1,940.3 million has been appropriated by the Congress for the DOE Weatherization Assistance Program (WAP) since its inception in 1977. Of this amount, about $1,900 million was allocated to States and Native American Tribal Organizations to implement their individual programs. Over the same period, we estimate that States and their subgrantee agencies spent about $200 million for administrative costs (including administration of EXXON funds) and $95 million for training and technical assistance purposes, for a total of $295 million of the $1,900 million. Therefore, our estimate is that $295 million plus $40.3 million or $335.3 million (of the $1,940.3 million appropriated) was not spent on actual weatherization.

Question: How much of the oil overcharge money ($3.6 billion) is available to the States for allocation to low-income weatherization?

Answer: Under terms of the court settlements, allocation of oil overcharge monies among approved programs and activities is at the option of each individual State. Based upon what the States have reported to DOE to date, a total of $575.6 million has been allocated by them for use in the Weatherization Assistance Program.

Question: If the Congress again inserts money into this program, would DOE consider revising its allocation formula by eliminating the squaring of degree days, which has historically allocated only about a fourth of the funds to the Southern and Western States, even though they contain over half of the eligible dwelling units?

Answer: The Department is not currently contemplating a revision in its WAP allocation formula, absent a change in statute. Any change in the allocation formula could result in reduced funding for some States with the result that many well established, well run programs (at both the State and local levels) would be severely disrupted.

Question: Please respond for the record and to me regarding the enclosed letter from the Oklahoma Weatherization Policy Advisory Council.

Answer: A response to the Oklahoma Policy Advisory Council's letter will be furnished under separate cover.

Implementation of the Alternative Motor Fuels Act of 1988

Question: Last year, S. 1518, the Alternative Motor Fuels Act of 1988 was enacted into law (P.L. 100-494). This bill passed both Houses overwhelmingly, a reflection of Congress' growing concern over urban air pollution and our energy security vulnerability. S. 1518 authorized $18 million over the four-year period from FY 1990-FY 1993 to develop and demonstrate natural gas and alcohol-fueled motor vehicles (light duty vehicles, heavy duty trucks and buses).

Does the Department intend to fully support this alternative fuels program?

Answer: The Department of Energy does intend to fully support the Alternative Motor Fuels Act of 1988.

Question: In the FY 1990 budget, DOE has requested just $1.5 million to carry out the activities authorized in the Alternative Motor Fuels Act. Does this mean the Department intends to request the remaining $16.5 million authorized in S. 1518 over the next three years? If so, what do you predict will be your funding requests in the out years?

Answer: The timing and amount of funds to be requested to carry out the activities authorized in the Alternative Motor Fuels Act is dependent on a great number of factors which are still to be determined. We have had preliminary meetings with the General Services Administration, the Urban Mass Transportation Administration, the Environmental Protection Agency, the Department of Transportation, and the National Highway Traffic Safety Administration. All of these agencies will be involved in the program, and are developing their requirements for funding, schedules, and interface to be included in interagency agreements. These requirements will be impacted by availability of vehicles, contracting cycles, existing related project activities, and existing procedures for government fleet acquisition and management.

A detailed preliminary program plan is being developed to outline specific tasks, schedules, and resource requirements. The plan will be distributed to the other agencies involved and industry for comments, and the final plan will provide funding estimates for the out years which may be included in future budget requests.

Question: With respect to the heavy duty truck and bus programs included in S. 1518, I understand that development of alternative-fueled medium and heavy duty engines is urgently needed because the EPA 1991 and 1994 standards for particulate emissions from diesel engines are "technology forcing." At the level of funding requested by DOE in FY 1990 for this work on trucks and buses, will the alternative-fueled engines be ready so that trucks and buses will be able to comply with the EPA standards? If not, I would imagine the standards will be devastating to mass transit systems and the trucking industry.

Answer: The heavy duty diesel engine industry has been working very hard to develop technological options which will allow them to meet the upcoming EPA emissions standards. The major options under investigation include fuel modifications (low sulfur and low aromatics diesel fuel), particulate traps, and the use of methanol as fuel. Although all of these strategies show promise, there are still unknowns such as cost effectiveness, production and maintenance costs, and some hardware development problems. Demonstration and evaluation programs, particularly in the area of alternative fuels utilization, are currently underway in Canada, in California, in New York State, in Florida, in the State of Washington, and in many countries overseas. All of the diesel engine manufacturers also are conducting their own testing and evaluation programs. It is hoped that the additional demonstration and evaluation activities included in S. 1518, when added to the work already underway, will provide enough data for industry to decide on a proper strategy to meet the standards.

Question: Is the $4 million authorized for alternative-fueled trucks and the $2 million authorized for alternative-fueled buses in S. 1518 really sufficient to perform the engine development and demonstration work necessary for these vehicles to be operational by the 1991 and 1994 time frames? If not, what would be an appropriate level of funding for these efforts?

Answer: The $4 million authorized for alternative-fueled trucks and the $2 million authorized for alternative-fueled buses in S. 1518 is focused on demonstration activities which include fuel infrastructure, data acquisition and collection, and analysis and reporting. It is assumed that engine development will continue to be done by industry themselves. The Act does not include funding for engine development efforts. The level of funding for the demonstration activities is appropriate.

Question: Has DOE met with engine manufacturers to determine what research and technology advances are needed to ensure the development of these alternative-fueled medium and heavy duty engines? If so, the Committee would like details on an appropriate R&D program. If you have not reached the point of developing the details of an engine development program, when can we expect you to have this information?

Answer: Several of the engine manufacturers have visited DOE to express their willingness to participate in the demonstration activities covered by S. 1518. In addition, preliminary meetings have been held with the American Truckers Associations to solicit their cooperation. We have also begun distribution of the preliminary program plan to industry for comments. Caterpillar and Mack Truck have already scheduled meetings to discuss their comments and review their technology readiness.

However, our goal has not been the development of an R&D program. The DOE heavy duty transport program has focused on long-range, high-risk R&D such as the minimally-cooled (adiabatic) diesel with waste heat utilization. Although these efforts will have an impact on emissions and fuel flexibility, they are long range in nature and will not have an effect on near-term emissions requirements. The research and development required to meet these near-term EPA standards has essentially been the responsibility of industry, with some basic technology investigations in areas such as combustion and ignition parameters conducted by DOE. There are no plans to change these directions.

Question: With respect to the government demonstrations of light duty vehicles authorized in S. 1518, has DOE conferred with the automobile companies to determine when these alternative-fueled vehicles will be available for the government to purchase?

Answer: Although the responsibility for actual acquisition of the light duty vehicles authorized in S. 1518 rests with the General Services Administration, DOE has discussed availability unofficially with the automobile companies. In general, flexible-fueled methanol vehicles will be available. General Motors has recently signed a contract with the State of California for delivery of 2,800 methanol-fueled vehicles starting at the end of 1990. Ford Motor Company is planning to manufacture two models of flexible-fueled vehicles to be made available to the public in model year 1993, with first production scheduled for late 1992. Chrysler is testing several prototypes and

will in all probability also have methanol cars available. However, to our knowledge, none of the automotive companies have plans for a natural gas-fueled vehicle.

QUESTIONS SUBMITTED BY SENATOR MARK O. HATFIELD

Increases for Conservation Budget

Question: I understand that recommendations were made to OMB increasing funding for several conservation programs for President Bush's FY 90 Budget. Could you tell me what areas were supported for increases? (Industrialized housing, lighting, advanced refrigeration work for CFC substitutes, and technology transfer).

Answer: No request was made to OMB for increased funding in the Conservation Research and Development Program as part of President Bush's FY 1990 Budget.

Question: Given that buildings account for 36% of all energy use and more than half of that is used in residential buildings, is the DOE considering increasing the portion of its budget dedicated to research for building conservation? Would this be for both residential and commercial building research? (Commercial work would include ADOT, a computer program funded at the Pacific Northwest Laboratory that will subcontract some work to the University of Oregon.)

Answer: The Department is requesting $15.6 million for Buildings and Community Systems research, technology transfer and regulatory activities in FY 1990. These R&D activities focus on selected high-risk and high-payoff projects, which are not likely to be pursued by the private sector alone. Many are carried out by private companies and institutions operating under cost-shared or cooperative agreements with the Department. Our budget was developed based upon our multi-year program plan which provides prioritization of our research needs, and is reviewed by industry. The budget includes work for both residential and commercial buildings. Research in the area of Advance Energy Design and Operations Technologies (AEDOT) was not requested in the FY 1990 budget.

Global Warming

Question: President Bush has stated his concern about global warming several times. Secretary of State Baker recently told an international conference convened at the State Department that improving energy efficiency is one of the best ways to minimize the potential problems of global warming. Which programs in the DOE can contribute the most to increasing energy efficiency?

Answer: The United States Government, with DOE involvement, launched an initiative last year to form an Intergovernmental Panel on Climate Change to advise the World Meteorological Organization and the United Nations Environmental Programme on climate change research and development. The need to develop information on the costs and benefits of possible solutions or mitigating measures is necessary if we are to arrive at the kind of national and international consensus that will be required for effective action. While scientists refine the state of our knowledge to understand the mechanisms, timing, and climatological effects of increasing accumulation of greenhouse gases, we should focus on prudent and cost-effective steps that are already justified on grounds other than climate change-actions which we can support no matter whether global warming ever occurs. On this basis, we encourage the support of cost-effective conservation and renewable energy activities. The Administrative and the Department are also supporting initiatives to eliminate CFC emissions.

SMITHSONIAN INSTITUTION

STATEMENT OF ROBERT McC. ADAMS, SECRETARY

ACCOMPANIED BY:

DEAN W. ANDERSON, UNDER SECRETARY

NANCY SUTTENFIELD, DIRECTOR, OFFICE OF PLANNING AND BUDGET

BUDGET REQUEST

Chairman **Byrd** [presiding]. The subcommittee will now hear testimony concerning the budget request for the Smithsonian Institution. The principal witness will be the Secretary, Mr. Robert Adams.

Mr. Secretary, please introduce your associates. Your entire statement will be submitted for the record and you may highlight it if you wish.

Mr. **Adams**. On my left is Mr. Dean Anderson, who is the Under Secretary.

On my right is Ms. Nancy Suttenfield.

In the interest of time, Mr. Chairman, since we have submitted it for the record, I'll forego my statement and we'll proceed directly to questions.

Chairman **Byrd**. I will lay into the record then along with your statement the introductory material that I have.

[The statement follows:]

Statement of Robert McC. Adams

Mr. Chairman and Members of the Subcommittee, I am happy to appear before you for the fifth year in support of the Smithsonian's fiscal year 1990 budget request. Again, I wish to express our gratitude for your continuing interest in the wide range of programs that the Institution undertakes.

I am pleased to report that, with your past assistance, we have progressed in a number of areas of longstanding interest to the Subcommittee. We have augmented the Institution's basic research programs, especially in astrophysics, tropical biology, and molecular biology. We have also strengthened collection-based research in history and the arts. We have emphasized even more the care and conservation of the National Collections, by providing scholars with better access to collections information and by improving the environments in which we store these collections. We have also begun to reduce the backlog of repair and restoration projects necessary to maintain our facilities. Most recently, we have begun a successful process of culturally and ethnically diversifying our staff because such diversity improves the scope and depth of the Institution's programs.

FISCAL YEAR 1990 BUDGET

Like the majority of budgets you will consider this year, our fiscal year 1990 budget request is essentially a "current services" budget. As you know, such a budget simply extends baseline operating costs for existing programs. As in the fiscal year 1989 budget, the Smithsonian's fiscal year 1990 capital budget continues to emphasize funding to eliminate over a number of years the substantial remaining backlog of deferred maintenance and repairs. The fiscal year 1990 capital budget also includes funding for continued construction and improvements at the National Zoo and for other previously authorized construction projects.

I would like to highlight notable features of our budget request and then turn to several other matters of concern in the current "steady state" budget environment.

OVERVIEW OF SALARIES AND EXPENSES

The Salaries and Expenses (S&E) request for operating costs totals $227.7 million and 4,330 work-years. Although this request represents an increase of $16.5 million and 98 work-years over the fiscal year 1989 appropriation, a simplistic comparison such as this to last year's funding level could easily be misinterpreted. The fact is that the Institution must apply approximately $14 million (or 85 percent of the increase) to cover "uncontrollable" increases in baseline costs. These "uncontrollable" cost items include, for example, the following: increased rental costs; personnel compensation benefits, like health and retirement; the cost of the January 1989 general pay raise, the cost of a new pay scale for security guards, and the full-year cost of new positions approved in the fiscal year 1989 budget; and utilities.

Mr. Chairman, I believe the last two of these "uncontrollable" items deserve special comment. First, unlike budgetary allowances from OMB in prior years—which have directly funded the full-year cost of the previous year's pay raise as a technical adjustment to baseline costs—the fiscal year 1990 allowance did not provide funding to cover the cost of the January 1989 pay raise. Executive budget formulation policy mandated that all Federal agencies absorb permanently within the allowance levels the cost of the recent pay raise. Accordingly, the Institution applied the dollars that OMB did allow for "technical" nonpersonnel inflationary adjustments to cover instead the full cost of the pay raise. Without this reallocation, Smithsonian bureaus would have no alternative but to keep positions vacant or to curtail expenditures for equipment, supplies, and other nonpersonnel items. Moreover, absorption of the cost of the pay raise would have been disproportionate among bureaus, depending upon the extent to which their operating budgets are personnel intensive.

Second, you will note a request for funding to cover the payment for water and sewer costs to the District of Columbia. As you may recall, in each of the past 2 years, OMB proposed that agencies themselves pay their water and sewer costs rather than the current practice of budgeting these costs in a lump sum in the D.C. appropriation bill. Since there is no money in the Smithsonian base to cover these new costs, OMB approved funds as one of its "technical" adjustments to cover this new utility item.

These two items alone account for $9.4 million in increased costs imposed on the Institution. Other uncontrollable items are detailed in the justification before you. While we have no choice but to acknowledge these "uncontrollable" costs, it is nevertheless disheartening to have to earmark such a substantial proportion of increasingly scarce additional dollars in this way.

There are, however, several programs in this budget that will enable us to make further progress in several areas that have been Institutional priorities for several years now. Consistent with the President's "steady state" budget philosophy, the fiscal year 1990 request will enable the Astrophysical Observatory to continue two major scientific instrumentation projects which Congress approved in the fiscal year 1988 and 1989 budgets:

(I) The construction of a submillimeter telescope array will allow scientists to study more effectively the formation of stars and planetary systems and the puzzling processes occurring in the cores of galaxies and quasars. With its unique combination of wavelength coverage and resolving power, the SAO submillimeter telescope array will be a major scientific instrument of international stature.

(II) With funding provided in fiscal year 1988 and fiscal year 1989, SAO has begun the conversion of the Multiple Mirror Telescope to a telescope with a single 6.5-meter diameter mirror. This instrument will enable scientists to gather data on objects much fainter than is currently possible and study more than twice as much of the universe than with the present instrument.

Consistent with our previous discussions with the Subcommittee and as part of the Institution's effort to reflect the Nation's cultural and ethnic diversity in research, exhibitions and public programs, Smithsonian management has sought also to broaden the diversity of its professional staff. The Institution recently undertook a Special Employment Initiative to recruit individuals from culturally significant minority groups, either not previously represented or underrepresented, in the research and curatorial ranks throughout Smithsonian bureaus and offices. For fiscal year 1990, the Institution requests permanent funding for 22 positions. To complement this initiative, the Institution also plans to offer a targeted professional development program for current junior staff. The Institution's fiscal year 1990 request also includes funding to initiate this companion program.

The Smithsonian also requests additional funds to enhance financial management. The Institution is acquiring a new accounting system to replace the current 20-year-old system. The requested funding will enable the Institution to install and implement the more highly automated general ledger and accounts payable programs that comprise the new system. With the new system, the Institution will be able to provide more reliable financial reports for internal and external audits, thus improving financial accountability.

With funding provided in the fiscal year 1989 budget, the Institution began to staff positions to manage the expanding repair and restoration program, which I will discuss shortly. In this budget are additional positions for the two offices principally responsible for managing this program: the Office of Design and Construction and the Office of Procurement and Property Management.

OVERVIEW OF REPAIR AND RESTORATION

Repair of facilities continues as a high priority in the fiscal year 1990 budget. As you know, in previous budgets funding for these capital requirements did not keep pace with deterioration. We are very appreciative of your support over the last few years in increasing funding for this program. In this budget, the Institution seeks to expand further its repair and restoration (R&R) program to a level of $26.7 million. Approximately half of the requested R&R funding is earmarked to continue the program we began in the fiscal year 1989 budget of major capital renewal for aging facilities, which includes the cyclical replacement of major building systems. The other half of the funds will support routine maintenance and repair projects, including facade, roof, and terrace repairs; fire detection and suppression projects; and access, safety, and security projects.

OVERVIEW OF CONSTRUCTION

For the Construction account, the Institution requests a total of $10 million for fiscal year 1990. This request includes funds for the design of renovations of the historic Old General Post Office Building and for the construction of Galeta/Atlantic laboratories and dormitory at the Tropical Research Institute. The fiscal year 1990 Construction request also seeks funding for Alterations and Modifications to current facilities—work that is essential to increase the functionality of these facilities based on program use. We are again asking for funds to conduct construction planning for future projects.

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

The fiscal year 1990 request for the Zoo Construction account is $6.5 million. This amount includes funding for the highest priority repair and renovation projects at Rock Creek Park and at the Zoo's Conservation and Research Center at Front Royal, Virginia. In addition, the Institution is requesting funding to continue the construction of a new Aquatic Habitats exhibit at the Zoo on the flora and fauna of the Amazon. The exhibit setting, a tropical rain forest, will illustrate the predominant features of tropical biology and emphasize the complexity, specialization, and species interactions found in the tropics.

COPING IN A "CURRENT SERVICES" ENVIRONMENT

Mr. Chairman, I have outlined what we believe is a very modest budget, reflecting as it does a "current services" philosophy for programs and continued attention to deficient facilities. Our fiscal year 1990 budget request before you is consistent with the need to curtail spending in order to reduce the Federal budget deficit. Given the stark reality of the budget deficit and the resulting funding constraints, there is much that we would like to do in fiscal year 1990 that we must defer for future consideration.

As an illustration of the magnitude of the difference between what we had hoped to do in fiscal year 1990 and what we are actually able to support in the fiscal year 1990 budget, a quick comparison will help. Our budget request before you includes only about one-fourth of the new and expanded program requirements that we had requested from OMB ($3.2 million vs. $12.1 million). In turn, our $12.1 million request to OMB represented less than half of the $27.4 million in new and expanded program opportunities and requirements initially requested by the bureaus and offices during our internal budget process. The bottom line is that almost 90 percent of the new resources requested by Smithsonian bureaus has already fallen out of the budget. These deferred needs and opportunities range from basic infrastructure requirements at the National Zoo, to scientific equipment for STRI's new laboratory, to the reinstallation of the Museum of Natural History's Native American Cultural Hall, and the creation of additional low-cost traveling exhibitions that would be of interest to minority or other currently underserved audiences.

The Institution may be able to request some of this funding for future fiscal years. I feel compelled to mention, however, two specific program areas for which current funding constraints may prove problematic, because we cannot defer these programs until a later time. The first of these is the wide range of programs that the Smithsonian is in the process of developing to commemorate the 500th anniversary of the voyages of Christopher Columbus. Fiscal year 1990 is a critical year for the timely development of the Institution's Columbus Quincentenary programs if we are to ensure our full participation in this important international historical observance, which will occur in 1992.

The second area of concern to me is the transition costs of the Smithsonian administration of the Museum of the American Indian, once the details of an acceptable agreement are finalized. Longer-term funding requirements will include the construction of new facilities in Washington for the collections, the renovation of a facility in New York, and the operating costs of curation of the collections and maintenance of these facilities. Faced with the reported deterioration of the collections, the Nation can ill afford a delay in implementing the agreement.

Finally, given the unavoidable reality of the Federal deficits which continue to plague all of us, I hope we will have an opportunity during the course of this hearing to discuss creative ways to allocate more effectively our current resource base. We would like to work with you to explore alternatives that would provide us with greater flexibility to reprogram funds yet still preserve the oversight that is your prerogative. For example, the current thresholds in reprogramming guidelines have not changed for several years. Due to ensuing inflation, the current $250,000 limit actually decreases the ability of an agency to reallocate its resources independently and expeditiously when faced with urgent known and unanticipated needs. In the absence of expanded resources, there is, for example, an increasingly strong case for undertaking reprogrammings within, and, perhaps even between, museum programs to increase the sensitivity and diversity of our public programming. We are also very much interested in the "end results" budgeting proposal that the U.S. Forest Service has been discussing with your Subcommittee. We believe that the Smithsonian too should be accountable for end results rather than for a less meaningful adherence to strictly numerical limitations.

Another area we would like to explore is greater use of no-year funding for activities such as collections acquisition and exhibition design and installation, because the need to spend 1-year funding prior to the end of the fiscal year sometimes interferes with the most efficient resource allocation.

Last, we hope that, even in the current budgetary climate, we will not have to face a future in which the Smithsonian must cover the costs of new programs or uncontrollable requirements within base resources. After the past several years, in which unfunded pay costs and the cumulative effects of inflation have eroded base resources, it is now almost impossible to cover any new costs thrust upon us without endangering current programs. It is absolutely essential that an educational and research institution of national prominence not lose completely the flexibility to respond to changes and to have sufficient resources to exploit opportunities for cultural and scientific leadership.

CONCLUSION

As we prepare to enter the last decade of the 20th century, our focus turns to what the Smithsonian Institution should be in the year 2000 and how we arrive there from where we are today. The challenge before us is to develop and change as the world around us changes. Even though the task before us is difficult, I believe that, with your continued support, the Smithsonian will meet the challenge.

FLEXIBLE FREEZE

Chairman Byrd. On February 9, President Bush presented to the Congress his budget proposals for fiscal year 1990. He's made some very specific proposals, but he's also proposed a rather general concept of the flexible freeze.

As I understand it, this freeze would apply to many domestic programs whose spending would not exceed the fiscal year 1989 level.

Do you know whether the Smithsonian will be one of the agencies under this flexible freeze?

Mr. **Adams**. We have to assume that it might very well be. We've had no indication that it isn't. We're certainly in a position to assess its effects on us if it were to be applied to us.

They're really very damaging because our position is one in which uncontrollables, genuine uncontrollables, constitute 85 percent of the funds that the OMB has been willing to allow us.

As a result, if there were—of course, the word "flexible" introduces an element of uncertainty—to be a freeze, we must cut well below the level of our current services.

And I think, without question, we would have to impose a freeze on hiring and we might very well have to consider whether we could be open every day of the week. I think there would be really quite substantial consequences.

The problem is that we are responsible, unlike most agencies of the Federal Government, for paying our own utilities, our own rent, and many other things of that kind, which do increase with inflation, and leave us exposed. So the effects on us would be very drastic.

Chairman **Byrd**. Your budget request increases from $245,935,000 in fiscal year 1989 to $270,890,000 in fiscal year 1990.

Is that correct? Is that the Reagan budget?

Mr. **Adams**. This is the Reagan budget request, yes.

Chairman **Byrd**. What is the Bush budget?

Ms. **Suttenfield**. As far as we know, there are no changes from President Reagan's budget.

Chairman **Byrd**. As you look at the line items in the Reagan budget request pertaining to the Smithsonian, are you supposed to proceed on the basis that those line items are, indeed, the Bush budget?

Mr. **Adams**. That is the assumption under which we are proceeding.

Chairman **Byrd**. Have you been instructed to that effect by Mr. Darman?

Mr. **Adams**. Do we have instructions?

Ms. **Suttenfield**. Right after President Bush's address to Congress, we spoke with our OMB liaison to see if there would be an impact on the budget as it was reflected in President Reagan's proposal. We were told "no" at that time. Since that time, we have also not been apprised of any further change.

Senator **McClure**. Can I ask a question on that subject?

Chairman **Byrd**. Yes.

Senator **McClure**. Have you had an opportunity to look at what the OMB characterizes as the book, "Building A Better America"?

Ms. **Suttenfield**. Yes.

Senator **McClure**. Do you see, after looking at that book, any specific changes in your budget?

Ms. **Suttenfield**. No.

Chairman **Byrd**. Why do you answer in the negative? Are you saying that the flexible freeze will pertain to other areas of the budget but will not pertain to yours?

Ms. **Suttenfield**. That's correct. According to what our OMB liaison told us, the day following President Bush's address, the flexible freeze will apply to programs other than the programs within the Smithsonian. That is because our budget request is based upon current services.

Chairman **Byrd**. Well, so are the others, are they not? That's what Mr. Darman refers to as the wonderland approach, the wonderland budget. Budgets based on current services.

Mr. **Anderson**. It's likely, Mr. Chairman, if I might interject, that were the Institution part of the executive branch, it might be more apprised of the strategies that the administration prefers to employ at this point.

As it is, we're at the end of the train, if you will, the tail end of the budget. I think we've been regarded in the past as largely an apolitical portion of the budget. Perhaps that might also explain—to a degree—the extent to which we have not yet been instructed by OMB of our status under this new flexible freeze.

Chairman **Byrd**. Can you describe for the subcommittee what your budget would look like if you were frozen at $245.9 million in fiscal year 1990?

Mr. **Adams**. At this point, we cannot. We would have to go back and calculate, as I say, some very damaging cuts to virtually all of our programs.

Chairman **Byrd**. Would you provide a detailed description for the record with regard to that question?

Mr. **Adams**. Certainly.

[The information follows:]

EFFECTS OF OPERATING UNDER A FISCAL YEAR 1990 "FREEZE" LEVEL OF $245.9 MILLION

If the Smithsonian had to operate under a "freeze" level of $245.9 million in budget authority for fiscal year 1990, there would necessarily be a significant reduction in funding for all of the Institution's capital accounts. Since 85 percent of the requested increases for the Salaries and Expenses account are for uncontrollable costs, such as the full-year funding of the January 1989 pay raise, the salary upgrade for the Institution's security guards, and the new payment of water and sewer costs to the District of Columbia, the Institution's first priority would be to cover these essential costs ($227.7 million).

The Institution would use the balance of the funding ($18.2 million) to fund the most essential repair and restoration projects throughout the Institution, including the National Zoo. This funding level, representing only 63 percent of the Institution's fiscal year 1990 request for repair and restoration projects in the R&R and Zoo Construction accounts, would reverse the Smithsonian's recent progress to reduce its massive outstanding backlog in essential repair work.

Moreover, under the "freeze" level of $245.9 million, the Smithsonian would have to defer all new construction projects throughout the Institution, including the National Zoo. This deferral would put added strain on the Institution's existing physical plant to support the Smithsonian's ongoing research, collections, and public service programs.

Finally, with the continued pressure on the Federal budget, the fiscal year 1991 passback from the Office of Management and Budget may not allow the restoration of any fiscal year 1990 reductions to the R&R, Zoo Construction, and Construction accounts, but rather base the funding level for fiscal year 1991 and future years on the fiscal year 1990 appropriation. If this occurs at the $245.9 million level, it would mean the permanent elimination of the Institution's ability to maintain adequately its physical plant, which the Smithsonian has worked hard to reinforce over the past several years, with both OMB and Congressional support.

MANAGEMENT PRIORITIES

Chairman BYRD. On page 9 of the budget justification, the Institution states as one of its management priorities to, quote:

> Critically evaluate all programs and support activities for purposes of discontinuing those that have outlived their usefulness or divesting them to other institutions * * *

Would you provide for the record for fiscal years 1986, 1987, and 1988 a list of programs that were discontinued or divested and the amount of money saved in each case?

Mr. ADAMS. Yes, sir.

[The information follows:]

DISCONTINUED OR DIVESTED PROGRAMS (1986-88)

In fiscal year 1986, the Institution abolished the Office of Educational Research. Based on an evaluation of needs and resources in the context of overall Institutional requirements, the Smithsonian reprogrammed the Office's base of $180,000. It redirected $82,000 to the National Science Resources Center—a Center established in response to various national studies which indicated the need to improve the quality of pre-college science and mathematics instructions. The remaining $98,000 we reprogrammed into other educational and support activities.

In fiscal year 1987, the Institution abolished the Smithsonian Environmental Research Center at Rockville, Maryland. This resulted in a savings of $1,600,000 in fiscal year 1988. Of this amount, the Senate and House Appropriations Committees approved redirection of $876,000 to strengthen existing Smithsonian biological activities consistent with Institutional expertise and the directions of modern biology. The National Zoological Park established programs in molecular genetics and the genetic management of rare and endangered species ($176,000); the Smithsonian Tropical Research Institute in Panama established a program in molecular evolutionary studies ($400,000); the National Museum of Natural History established a molecular systematics laboratory at the Institution's Museum Support Center ($250,000); and the Institution established a fellowship program to further research efforts in the field of molecular biology ($50,000).

In the Facilities Services area, conversion from contract to inhouse processing of preventive maintenance record-keeping in the Office of Plant Services reduced annual costs by approximately $100,000. OPlantS applied these savings to the higher costs of maintenance supplies and services. The close down of the Radiation Biology Laboratory produced annual savings of about $150,000 in utilities which the Institution has applied to offset overall increased costs resulting from higher consumption and rates. The Office of Protection Services has changed over to a proprietary security system and has redirected the savings of $356,000 to filling of guard positions.

DISCONTINUED OR DIVESTED PROGRAMS

Chairman BYRD. Do you have some examples of programs that have been discontinued or divested into other institutions.

And were there any programs discontinued or divested in connection with the fiscal year 1990 budget?

Mr. ADAMS. Mr. Chairman, perhaps the best example we could give was a major divestment that occurred in 1987. We closed our Radiation Biology Laboratory in Rockville, MD. There are no major divestments on that scale that are included in the fiscal year 1990 budget, but I should point out that, in fact, the 45 or so budget lines that constitute our budget represent in each case a diverse grouping of programs. And there have been divestments throughout each of those items, because each of those will include various research projects and things of this kind. Indeed, in order to make that budget at all, those components have had to be pared and new items introduced.

OFF-MALL STORAGE FACILITIES

Chairman **Byrd**. Under the construction planning activities on page 249 of the justification is the following statement, quote:

> The Institution will formally consider off-Mall facilities for collections' storage as a solution for increasingly overcrowded conditions at nearly all Smithsonian museums.

Have you done any sort of studies to determine the optimum space needs?

Mr. **Adams**. The optimum space needs of the whole Institution?

Chairman **Byrd**. For what you're talking about. We'd like that for the overall Institution.

But you're also making specific references to collection storage. "The Institution will formally consider off-Mall facilities for collection storage * * *."

Mr. **Adams**. Mr. Chairman, we have a major center in Suitland, MD, where a number of buildings have been especially constructed for collection storage. There are additional buildings in the same vicinity which are rapidly deteriorating.

I think the question of long-term collection storage is one that is always with a great complex of museums and we are deeply concerned about that question.

We still have some additional space in the immediate vicinity of the Museum Support Center in Suitland, MD, and that would be, of course, the optimum area in which to build additional storage facilities in the sense that we already have communications with the facilities that are there.

So it's possible to move people and equipment back and forth fairly readily. But, in the long run, off-Mall storage in many additional areas has become an increasing problem. Our collections are growing with 4 million or so new acquisitions a year and we've got the continuing prospects that we are going to face a collection storage problem in the future.

How far we can afford to go with those, it isn't clear. That's indeed something that we should look at.

Chairman **Byrd**. As I understand you, it is not necessary that the collection storage facility be located in the immediate metropolitan area of Washington, DC.

You referred to Suitland, MD. Is that in the metropolitan area?

Mr. **Adams**. That is in the metropolitan area. It's only about a 20-minute trip from our present facilities. The question of locating storage at a greater distance will vary from area to area.

In the natural history field, which is where the great bulk of our collections are, because they are systematic in character, there is a need to have those accessable to people who are working back and forth from one species to another.

With regard to many of the larger objects in the American history collection, that may not be so necessary.

Chairman **Byrd**. Do you think there might be some savings realized by locating outside this high-cost area?

Mr. **Adams**. I think there might be, sir. Obviously, there is a tradeoff between the frequency of access that one needs and the distance one must go. But I think that is certainly a possibility.

Chairman **Byrd**. What is the extent of the overcrowded condition faced by the Smithsonian?

Mr. **Adams**. The overcrowding is most noticeable at present in the Natural History Museum. That is the museum also that is moving into the new facilities in Suitland, MD.

There's a great deal of material that is still crowded in the corridors and will presently be moved out. American history faces I think more of a problem in the deterioration of the material. Storage is a problem that one never completely solves in the museum business.

Chairman **Byrd**. Are you exploring the possibility of locating facilities outside of the high-cost area?

Mr. **Adams**. We had not formally done so, but I think we could undertake to do so. I think it would be useful. We have a facility belonging to the National Zoo located at Front Royal. While there are special advantages to that location for the shy breeding animals that are located there, that, indeed, suggests that one can operate at a distance from Washington.

Mr. **Anderson**. It might also be worth noting, Mr. Chairman, that a substantial portion of the large objects owned by the Air and Space Museum which are not on display on The Mall are on rather extended loan to other organizations around the country.

That is one method, if you will, of solving the storage problem and still making the objects available to the public.

Chairman **Byrd**. Would you look at the feasibility of locating facilities such as this in West Virginia?

Mr. **Anderson**. We'd be pleased to, sir.

Chairman **Byrd**. I'd like you to study the issue and report back to the subcommittee. There might be some real opportunities that ought to be explored.

Mr. **Adams**. We're certainly willing to do so, sir. I might say that I've spoken in the last few days with the head of our Astrophysical Observatory and we are conscious, as I think the whole national scientific community is, of the very severe loss we've suffered through the collapse of the radioastronomy laboratory. And he's placed himself on record, in fact, as supporting the early reconstruction of that facility.

So I think we are aware of the opportunities to move in the direction of West Virginia and we are prepared to do that.

SPECIAL SALARY RATES FOR SECURITY GUARDS

Chairman **Byrd**. On page 26 of the budget justification, you state that the National Gallery of Art, the Department of Defense, and the Smithsonian Institution have requested the U.S. Office of Personnel Management to approve special salary rates for security guards in grades 3, 4, 5, and 6 in the Washington metropolitan area.

You are requesting for fiscal year 1990—I've been handed a note saying that I've established the new record. I convened the Senate and recessed it in 0.66 seconds. [Laughter.]

Senator **McClure**. Mark that down for efficiency. [Laughter.]

Chairman **Byrd**. My old record was 1.1 and 6/100th.

You're requesting for fiscal year 1990 $431,000 to annualize the cost of upgrading these positions. Please provide for the record an explanation of the computations used for the $431,000 requested for fiscal year 1990.

[The information follows:]

SECURITY GUARD SALARY UPGRADE

The Smithsonian, in conjunction with the National Gallery of Art and the Department of Defense, requested the Office of Personnel Management to establish a special salary scale for security guards to eliminate its continuing inability to recruit sufficient numbers of well-qualified applicants and to lower the high turnover rates for these positions. The Office of Personnel Management approved the establishment of this special salary scale, effective March 12, 1989.

The partial year costs of this increase, which the Smithsonian will have to absorb in fiscal year 1989, are approximately $0.9 million. In fiscal year 1990, the Smithsonian will require full-year funding of approximately $1.363 million for this increase (revised estimate (3/89); this revised estimate represents a decrease of $0.362 million from the funding requested in the fiscal year 1990 budget.) In the fiscal year 1990 Congressional budget request, the Smithsonian requested additional funding totaling $1.725 million for the proposed salary upgrade for SI security guard positions: $1.294 million included in the fiscal year 1989 "base" for OPS; and $0.431 million included in the fiscal year 1990 Necessary Pay increase for OPS.

The initial estimate of $1.725 million was based on calculations prepared by the Institution's Office of Personnel Administration and the Office of Planning and Budget in December 1988 using the following assumptions:

Number of Positions.—The salary upgrade would involve a total of 602 authorized guard positions in Grades GS-04 to GS-08: GS-04 (201 pos.); GS-05 (308 pos.); GS-06 (15 K-9 officers); GS-07 (62 pos.); and GS-08 (16 pos.).

Night Coverage.—The calculations estimated an average of 19 hours per week for night differential pay (10 percent of base hourly pay).

Sunday Coverage.—The calculations estimated an average of 9 hours per week for Sunday differential pay (25 percent of base hourly pay).

Overtime Hours.—The calculations estimated an average of 10.5 hours per week for overtime for K-9 officers (GS-06) and 6 hours per week for other guards (150 percent of base hourly pay). The higher overtime estimate for K-9 officers reflects the recent Office of Personnel Management decision regarding compensation for the time required to care for and handle patrol dogs, after hours and during periods of extended leave.

Holiday Coverage.—The calculations estimated an average of 73 hours per year for holiday hours worked (100 percent of base hourly pay).

Personnel Benefits Costs.—The calculations estimated personnel benefits costs at 20 percent of base pay.

Average Step.—The calculations estimated the costs for salaries at each grade level at the estimated average step (Step 4).

Adjustment to Reflect January 1989 Pay Raise.—Since the initial estimate (Dec. 1988) and the comparison between the current GS pay scale and the proposed Guard pay scale were based on the pay scales for 1988, the effects of the January 1989 pay raise were factored into the calculation by multiplying the cost difference under the 1988 pay scales by 1.041.

The revised estimate (March 1989), based on the actual pay scale as approved by the Office of Personnel Management, incorporates two major changes that affect the calculations: (1) GS-08 security guard positions have been excluded from the new pay scale (as approved); and (2) the annual salary structure for the grades and steps for Grades GS-03 to GS-07 have been adjusted to facilitate the transition between the "top end" of the new pay scale at the GS-07 level and the transition back to the regular GS pay scale at the GS-08 level. In addition, the comparison between the current GS pay scale and the Guard pay scale was based on the GS pay scale for 1989 (reflecting the Jan. 1989 pay raise) and the approved new Guard pay scale (effective March 12, 1989). The revised estimate results in a decrease of $362,000 from the funding requested in the fiscal year 1990 budget ($1.363 million, instead of $1.725 million).

REQUEST TO OPM

Chairman **Byrd**. When did you make the request of the Office of Personnel Management?

Mr. **Adams**. May I ask that that question be answered by John Jameson, Secretary for Administration?

Mr. **Jameson**. October 1988.

Chairman **Byrd**. Have you received approval from OPM as to your request for special salary rates?

Mr. **Jameson**. No, sir.

Chairman **Byrd**. What is the justification for the Smithsonian request?

Mr. **Jameson**. There is strong competition for jobs in this area which has a low unemployment rate. We are having great difficulty recruiting guards and keeping the ones we have. Our turnover was 30 percent in 1987 and 23 percent last year.

Chairman **Byrd**. Tell us a little bit. Is there a shortage of security guards in grades 3, 4, 5, and 6?

Mr. **Jameson**. Yes, sir; particularly at the grades 3 and 4 level where we generally recruit for the entry level.

By and large, they can get more money working at McDonald's or delivering pizza than they can being a guard at the Smithsonian. We have about 600 guards. We have about 100 vacancies at the moment. We make extensive use of temporaries, but they're not very satisfactory because they're paid at the low end of the scale. Given the investment of time and training, we'd like to keep our guards once we have them.

Chairman **Byrd**. How many vacancies did you say you had?

Mr. **Jameson**. About 100. Against authorized positions.

Chairman **Byrd**. For security guards.

Mr. **Anderson**. Mr. Chairman, we are faced with the necessity of closing certain areas to the public on an unscheduled basis should there be a case of flu—should somebody be late getting to work. There simply aren't enough guards stationed around the campus to keep all of the exhibition areas open all the time, as they should be.

Chairman **Byrd**. You have how many to fill?

Mr. **Jameson**. We have about 600 authorized full-time positions.

Chairman **Byrd**. Inform the subcommittee when you receive a response from OPM.

Senator McClure, would you like to address this question?

Senator **McClure**. Only to this extent. What are those salary levels?

Mr. **Anderson**. Grade level 3, Senator, I just happen to have it in my pocket. Now, this might be prior to the recent January pay raise. I don't know if it's current or not. They start at $12,036. That would be the entry level recruiting amount.

Senator **McClure**. Could you supply for the record the numbers of persons that are on disability retirement in the guard force?

Mr. **Anderson**. Yes.

Senator **McClure**. And whether that's changed in the last few years.

[The information follows:]

GUARD DISABILITY RETIREMENTS

There is currently only one guard with a pending disability retirement. There have been only seven Smithsonian guards who have retired on disability since fiscal year 1983.

CONTRACTUAL SERVICES

Chairman **BYRD**. The justification on page 14 indicates that the Smithsonian follows the requirements of OMB Circular A-76 that Federal agencies rely on commercial sources to supply needed products and services rather than using Government employees where it is cost effective to do so.

Mr. **ADAMS**. Again, Mr. Jameson will discuss that.

Mr. **JAMESON**. Mr. Chairman, about 10 percent of our operating budget, or about $23 million, goes into contractual services. Every area of the Smithsonian activity benefits from such activity.

I can think of some major areas where we use contract services—elevator and escalator maintenance, our checkrooms are manned by contract people, major amounts go into architectural and engineering work, major repairs to our buildings.

So it's about 10 percent. We try to do two studies each year of current operations to see whether those studies result in contracting out more work.

Chairman **BYRD**. What do the studies cost on the average?

Mr. **JAMESON**. We do them in-house with our staff in the Management Analysis Office. We try to take each year one area which is currently under contract and to see if it should remain under contract. We take one area that is currently done in-house and look at it to see if it should be placed under contract.

Chairman **BYRD**. So you do sometimes contract it out?

Mr. **JAMESON**. No; we're looking at activities of the institution that might merit being contracted. But all of the analytical work is done in-house.

Chairman **BYRD**. So you haven't contracted out any activities previously done in-house?

Mr. **JAMESON**. We have contracted for some guard service at the Cooper-Hewitt Museum, for elevator maintenance and operations and for checkroom attendants, previously performed in-house.

This has all happened over the last 8 or 10 years.

Chairman **BYRD**. They have been contracted out?

Mr. **JAMESON**. Yes, sir.

Chairman **BYRD**. How much money has been saved as a result of these studies?

Mr. **JAMESON**. Taking the Cooper-Hewitt as an example, my information is that it cost us probably a little bit more to do it under contract than it did to do it in-house. But part of the reason for contracting has to do with the limitations placed on employment. And part of it simply has to do sometimes with the availability of people. We have to go wherever we can go to get help.

Chairman **BYRD**. What have the completed studies shown?

Mr. **JAMESON**. The completed studies that we've done on escalator/elevator maintenance and checkroom attendants indicate we should continue to do that under contract. Studies we have done recently on protection services, taking one of our major museums as an example, have indicated that we are best served financially and functionally if we do it with in-house staff.

Chairman **Byrd**. Do you believe the time and effort devoted to the studies justify the end result?

Mr. **Jameson**. I think we have gotten assurance for the managers of the Institution that we are proceeding on the proper financial and programmatic courses. Yes; they've been worthwhile.

CHILD CARE CENTER

Chairman **Byrd**. Last year, the Congress appropriated $300,000 for renovations for some of your space for a child care center. Is this center now operational?

Mr. **Adams**. Yes; our first center is in operation. We will be working on the second one this year.

Chairman **Byrd**. How has the center been received by your employees?

Mr. **Adams**. It's been very well received throughout the Institution.

Chairman **Byrd**. What impact has there been on the absenteeism?

Mr. **Anderson**. Mr. Chairman, I think it's a little bit too early to tell. It's been in operation for about 6 months.

I think we need a year or two of experience. Certainly, the information I pick up is that the parents are delighted to have children so close at hand.

Mr. **Adams**. I think one needs to see the benefits of the day care centers as not being measured solely by these factors.

Chairman **Byrd**. I understand it was anticipated that fees paid by the employees would be sufficient to cover the operating cost of the center.

Has that been the experience?

Mr. **Adams**. At the present time it is running a small deficit, but it has always been our assumption that the parents would need to carry on some fundraising activities. Something slightly over 20 percent of the children who are enrolled are there on a scholarship basis, where they pay lower monthly fees.

Chairman **Byrd**. Was it anticipated that the fees paid by the employees would be sufficient?

Mr. **Adams**. I think we always assumed we would have to carry on some fundraising.

Chairman **Byrd**. What is your experience showing? What percentage is being carried by the employees and what percentage by fundraising?

Mr. **Jameson**. Mr. Chairman, at least 90 percent of the operating budget is borne by fees. And if there's a small shortfall, it will be either handled through fundraising by the parents as the Secretary suggests, or the other alternative is marketing the excellent curriculum guide that has been designed by the contractor for the child care center.

I think the child care center will see some income from that, which will fully meet any shortfall.

Chairman **Byrd**. Would you supply for the record dollars and cents figures to show the shortfall and the amounts that are being paid by the employees and the amounts that are being paid by the fundraising activities?

Mr. **Jameson**. We'd be pleased to.

Chairman **Byrd**. As you gain more experience on how the center might be affecting the employees' performance, could you keep the subcommittee informed?

Mr. **Adams**. We'd be delighted to.

[The information follows:]

Child Care Center Funding

The Smithsonian Early Enrichment Center now has an enrollment of 38 full time and 7 part time children, 33 of whom are children of Smithsonian employees. Employees were given advance notice of available spaces before opening, but recruitment was then opened to other Federal agencies and the general public in order to reach capacity. Since this is a new operation, it is difficult to predict how the actual numbers will work out. The present rate of tuition vs. expenses leaves us with about a $250 per week shortfall which means that fundraising efforts will have to meet a goal of $13,000 for the year. The Center has already raised about half that amount and is pursuing the possible marketing of the specially designed museum-based curriculum as another income source.

D.C. WATER AND SEWER COSTS

Chairman **Byrd**. Senator McClure.

Senator **McClure**. Just one question, Mr. Chairman, and I'll submit the balance for the record. I'm trying to make sure I understand the budget submission with respect to the fee charged by the District of Columbia for the water and sewer.

I understand you have included the anticipated charge within your budget?

Mr. **Jameson**. Yes, sir; approximately, $3.7 million.

Senator **McClure**. The District made that proposal to Congress last year. Certainly Congress will not enact it this year. [Laughter.]

Mr. **Adams**. I would assume so.

Senator **McClure**. Thank you. I'll submit the balance of my questions for the record.

Chairman **Byrd**. I have some questions along that line, too, but I'll submit them for the record. And I have other questions which I will submit for the record.

GENERAL POST OFFICE BUILDING

The budget justification discusses the need to begin the design work at a cost of $1,750,000 for the renovation of the General Post Office Building, a renovation which is estimated to cost $40 million.

Mr. **Adams**. That figure is probably low.

Chairman **Byrd**. What would be the new estimate?

Mr. **Adams**. I couldn't say for sure, but I'd be surprised if it were less than $50 million.

Chairman **Byrd**. Is there anyone occupying the building?

Mr. **Adams**. I'm not clear on the details. Is anyone in the building at this point?

Mr. **Anderson**. Yes; indeed. The building remains under the administration of the GSA, Mr. Chairman. They have a number of temporary Federal agency offices and staff that they are housing within the structure.

Mr. ADAMS. If I might speak, if I may, to the item in the budget which, in some sense, is our concern. The building is continuing to deteriorate.

It's one of the historic buildings in Washington and, sooner or later, it must be done. But, the longer we wait, the more it costs. But because we're under pressure, this is an item that we may have to postpone.

RESEARCH VESSEL

Chairman BYRD. The budget proposes the purchase of a 90-foot research vessel for the Smithsonian Tropical Research Institute at a cost of $1.7 million. I understand that the Institute currently uses a 65-foot, 26-year-old converted motor yacht which was donated some 10 years ago.

What would be the effect of delaying this purchase for 1 year in the interest of holding down Federal expenditures?

Mr. ADAMS. I'd like to call upon Dr. Robert Hoffmann, who is our Assistant Secretary for Research, to answer the question.

Dr. HOFFMANN. The current vessel is old, as you point out. Consequently, it requires more downtime in dock in order to make sure that it remains seaworthy.

The result is that we are less and less able to carry out our ongoing research. In addition, of course, being old it is not outfitted for some of the newer sorts of work that we would like to do. We would have to postpone that.

The final major impact is that our land-based Galeta Laboratory in Panama was struck by a major oilspill over 1 year ago. The result is that that has eliminated the usefulness of that laboratory for many sorts of research.

We have converted that essentially into a laboratory to study the effects of the oilspill. That in itself, of course, is very valuable. But what it means is that much more reliance has to be placed now upon the vessel in order to get to these nonpolluted areas to carry out research.

The short answer is that it would have the effect of drastically curtailing a number of our ongoing research activities.

NATIONAL ZOOLOGICAL PARK

Chairman BYRD. Turning to the National Zoo, the budget justification request $1.4 million for repairs and preventive maintenance of existing facilities at the Rock Creek Zoo complex. The justification further states that the request, quote, "will help ensure that the zoo's future will not include a large backlog of major repairs." Close quote.

Does the zoo have a current backlog of major repairs and how large is it?

Mr. ADAMS. We have Dr. Michael Robinson with us, the Director of the zoo, who can comment.

Dr. ROBINSON. Unfortunately, sir, we have a very large area of pathways, many roads, and roofs on all of our buildings. We are aggressively moving through the repairs and we have problems in the elephant house and the small mammal house. And we have things of that kind that we try to keep in cycle.

But, like painting a bridge, by the time we get to the other end, we start this all over again. We really have more buildings and roads than any other branch of the Smithsonian.

If I could put in a point right now, we're 100 years old this March 2. Our 100th birthday is an indication of the nature of our problems.

Chairman BYRD. How do you plan to address the backlog?

Dr. ROBINSON. We have this very detailed program of maintenance. As we get the request, we will be moving through these repairs one by one.

Chairman BYRD. Congratulations on your 100th birthday. We will be commemorating ours, our 200th birthday.

Senator McCLURE. We got our bill from that one already. [Laughter.]

Mr. ANDERSON. The National Portrait Gallery is very pleased to help commemorate the bicentennial of the Congress with a special exhibition which should open I believe later this week.

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. Very well. I have some further questions. And others may submit them as well.

Thank you very much for your testimony.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Management Priorities

Question 1: On page 11 of the budget justification, the Institution states, as one of its priorities under General Development to "examine and continue to pursue new product development, new auxiliary enterprise opportunities, and opportunities for collaboration that may exist among core revenue-producing programs". Can you give the Subcommittee some examples of new products, enterprise opportunities, and collaborative efforts that have helped increase the non-federal sources of revenue available to the Smithsonian?

Answer: The Institution's membership programs, merchandising, and restaurants currently collaborate. For example, all museum members receive the Smithsonian Mail Order Catalog. The Smithsonian Engagement Calendar, developed by Product Development and Licensing, is used as an incentive premium for Contributing Members (those who make a substantive monetary gift over their membership fee). Members are encouraged to use the Associates Court and Commons eating facilities.

Our newest efforts relate to video discs, films and like mass media products. For example, the Institution is co-producing with Eastman Kodak a series of video discs on Smithsonian topics. These will be mass-marketed; the Smithsonian will receive a royalty on each sale.

Question 2: How much did these activities contribute to the Smithsonian's revenues in FY 1988? Do you have estimates for fiscal years 1989 and 1990?

Answer: The media activities have yet to contribute to Institutional revenues. Development costs are substantial and will be recouped from initial profits. The Kodak-Smithsonian videos, our first venture, will not be available to the public until fall 1989.

The increase in the Institution's FY 1988 Trust Fund revenues stems from new initiatives of prior years: renovation and upgrading of all museum shops, changes in mailing schedules for Mail Order merchandising, and enhanced investment income given changes in investment policies.

Troubling is evidence that revenue growth appears to have "topped out" in FY 1989. Sales are behind budget in both the Museum Shops and Mail Order. The Air and Space magazine has yet to reach its circulation projections. While the new National Air and Space Museum restaurant is doing well, as planned, the Institution is using its added revenue to pay down the bank loan for its construction.

New unrestricted funding of $1,500,000 is budgeted for FY 1990. During FY 1988, the Institution took significant steps to enhance its development activities under our newly appointed Assistant Secretary for External Affairs, Dr. Thomas J. Lovejoy. This action was especially timely as FY 1988 saw a 13% drop in restricted gifts and grants designated for operating purposes. Given FY 1989 to organize and marshall forces, FY 1990 will see the first successes of this appointment.

Question 3: What plans does the Smithsonian have for increasing the funds generated by these activities in future years?

Answer: At their May meeting, the Regents will discuss the Assistant Secretary for External Affairs longer term fund raising plans. The loan for the National Air and Space Museum's restaurant will be paid off by June 30, 1998. All revenues thereafter, from the restaurant will accrue to Unrestricted Trust Funds. In suspense are plans to enlarge both the Museum Shop and the public restaurant at Natural History. The new Director of Natural History is currently rethinking space allocations. The Secretary is presently marshalling a re-evaluation of Air and Space Magazine. Royalties from the recent introduction of the Smithsonian Collection of furniture reproduction will accrue to Trust Funds beginning in FY 1990.

Museum of African American History and Culture

Question 4: Could you briefly summarize the status of the Institution's efforts regarding the establishment of a Museum of African American History and Culture?

Answer: At the request of Chairman Yates at the 1988 House appropriations meeting, the Secretary of the Smithsonian began a series of meetings with Institutional staff and advisors to think through the establishment of a Museum of African American History and Culture. The Institution submitted this report in January 1989. Below is an Executive Summary of the findings:

1. The Smithsonian is committed to making comprehensive efforts to enhance its representation of minority achievements and concerns, and to improve the universality of access to and participation in all of its activities. We recognize that such efforts are a primary and continuing Institutional responsibility, and that they must accompany all other steps referred to herein.

2. There is a strong case for introducing a special focus for exhibits, studies, public programs and other activities in the field of African American culture and history. We believe such a special focus will strengthen the Institution's efforts to respond to minority concerns -- and to meet its own responsibilities. It is also a desirable step in light of the special conditions affecting museum collections, public programming, and scholarship in this area. If this conclusion is concurred in by the Board of Regents and has the support of the Subcommittees, the Institution proposes to move promptly to establish a Bureau in the area of African American culture and history with a separate budget. Although timing is uncertain (depending on the pace of collecting activity and other factors), these organizational and financial steps are likely to require a commitment of space and facilities.

3. Assuming that this commitment of space ultimately will lead to the construction of a new facility, there is still uncertainty as to where it should be located. The tentative position taken here is that it should adjoin the National Museum of American History. It is proposed to seek the advice of a broad, carefully chosen committee in addressing the question of the location and mandate of the new facility.

4. It is imperative that the Smithsonian's expanded activities in this area be accompanied by extensive discussions with the member institutions of the African American Museum Association and other organizations with commitments to the field, and that any steps taken be designed to strengthen common interests and improve networks of communication.

5. The Anacostia Museum has a distinctive history and purpose, and is not a facility that should be thought of as disappearing if and when a National Museum of African American History and Culture comes into existence in central Washington. The same committee from whom advice will be sought concerning the possible location and mandate of the latter will be asked for its advice as to the future of the Anacostia Museum.

Museum of the American Indian

Question 5: On January 30, 1989, the Smithsonian Board of Regents unanimously adopted a resolution to accept in principle the major provisions of the most recent draft agreement between the Museum of the American Indian, Heye Foundation and the Smithsonian Institution. Would you briefly summarize the major provisions of the most recent draft agreement?

Answer: The major provisions of the draft memorandum of understanding between the Museum of the American Indian, Heye Foundation and the Smithsonian Institution are conditioned on approval of its terms by the courts in New York, the enactment of authorizing legislation by the Congress, and the availability of funds with which to proceed. Among these provisions are the transfer of the collections, endowment, and all other property of the Heye Foundation (except the building at 3753 Broadway in New York) to the Institution and a requirement for the Institution to offer employment to the staff of the Heye Foundation at the time of the transfer of assets.

The draft also contemplates the establishment of the National Museum of the American Indian within the Smithsonian. Its primary manifestations would be a structure on the Mall east of the National Air and Space Museum; a storage and conservation facility at the Institution's Museum Support Center at Suitland, Maryland; and a facility designated "The George Gustav Heye Center of the National Museum of the American Indian" primarily on the street level floor of the old United States Custom House at One Bowling Green in New York. The draft memorandum also provides for a board of trustees to advise and assist the Board of Regents on the administration, maintenance, operation, and preservation of the Museum and its collections.

Question 6: I understand that the resolution adopted by the Board of Regents identified unresolved issues which include the size of the Custom House facility in New York and the availability of financial support from New York sources. What is the status of negotiations regarding these issues?

Answer: The draft memorandum now provides for a Custom House facility of approximately 82,500 gross square feet (g.s.f.). Of that amount, about 57,000 g.s.f. would be the direct responsibility of the Smithsonian and would be used for exhibition, education, and administrative purposes. An additional 25,500 g.s.f. would be administered by the General Services Administration, which is the custodian of the entire building, and would be made available to support the Smithsonian's museum programs there. This shared space would include an auditorium (21,000 g.s.f.) and the shipping and receiving area (4,500 g.s.f).

At a hearing on the status of the memorandum and on prospects for the new museum, which was held March 9, 1989, before the Committee on Interior and Insular Affairs of the U.S. House of Representatives, the representative of the Mayor of New York announced the City's commitment to fund one-third, or not more than $8 million, of the estimated cost of refurbishing the Custom House facility. She also indicated that the Institution might be eligible for certain kinds of support for program activities there. A similar commitment is expected from the State of New York, but has not yet been confirmed.

Question 7: What is the estimated total cost of establishing the National Museum of the American Indian within the Smithsonian?

Answer: The Smithsonian is in the process of developing estimates for the costs of constructing and operating the facilities and programs of the proposed Museum. These estimates also will include the costs of taking control of and providing security for the collections in New York; accessioning them into the National Collections; moving them to the Smithsonian's Museum Support Center in Suitland, Maryland; and creating from them the initial exhibitions in the Mall and Custom House facilities, as well as others that may travel to various parts of the country.

Question 8: What is the estimated share of federal funding required?

Answer: Because the Institution is still in the process of developing these estimates, it is not possible to indicate the required level of Federal funding for the Museum. However, the Institution will regularly and fully inform the Subcommittee of the estimates as they become available.

Sale of the National Museum of African Art Properties

Question 9: The Subcommittee had been given assurances that it would be kept informed prior to any final settlement involving the sale of the National Museum of African Art Properties. Why did the Subcommittee have to rely on newspaper accounts to learn that the sale transaction for these properties had been completed?

Answer: The Smithsonian provided notification to the Subcommittee by telephone prior to the sale of the African Art Properties. In the future, the Institution will provide such information in writing.

Question 10: Were there any conditions attached to the properties that restricts the future use of these properties?

Answer: Conditions for future use of these properties are quoted from the Contract for Sale and Purchase of the National Museum of African Art:

> "22. Purchaser agrees that it shall not sell, lease, or otherwise dispose of or transfer any of its interest in the property unless such sale, lease, or other disposition or transfer shall be for residential purposes. Purchaser further agrees that Seller will place language in the deed to the property so that interested third parties also might enforce this provision."

Question 11: Were there any conditions attached to the sale of these properties regarding the future use of the Frederick Douglass home?

Answer: Conditions for future use of the Frederick Douglass home are quoted from the Contract for Sale and Purchase of the National Museum of African Art:

> "17. Purchaser intends that a portion of the premises which served as the home of Dr. Frederick Douglass will be preserved as a fitting memorial to his life and his work. Purchaser intends to set aside approximately 200 square feet as an area to exhibit objects and documents to memorialize Frederick Douglass; said area to be accessible to the public during reasonable hours as established by Purchaser. Seller agrees to cooperate with Purchaser in assembling suitable objects and document, and to provide assistance to establish the exhibit."

Cultural and Ethnic Diversity in Professional Staff

Question 12: As a result of the Institution's own initiatives, as well as to carry out directives contained in the Statement of Managers, which accompanied the FY 1989 Interior Appropriation Bill, the Smithsonian has included a new program, in the FY 1990 budget, to increase the cultural and ethnic diversity in your professional staff. The justification (pp. 23-24) proposes an increase of $1,102,000 and 27 FTEs for the program. Would you describe for the Subcommittee how you went about designing the program and identifying which organizations would receive the additional funding and positions?

Answer: The Smithsonian designed this program to focus on positions in the research/curatorial and other professional fields. The Institution encouraged all bureaus and offices to identify and justify appropriate positions. A committee, under the chairmanship of the Under Secretary, screened and approved these positions as temporary positions. The Institution then advertised these temporary positions and strongly encouraged any qualified minority and female candidates known to the hiring bureaus to apply. The Institution followed all federal regulations covering competitive procedures.

Question 13: It seems that because of the way the program is structured, the new employees who will fill the positions might be viewed somewhat differently from other employees, who would be hired during the regular course of business, and might, therefore, have more difficulty being assimilated in the organization. Would you like to comment on that observation, or indicate what you intend to do so that this is not the case?

Answer: Smithsonian management has held several meetings on this very subject, because some members of the senior staff expressed similar misgivings. The final outcome was the determination that the support network for any new staff member is rather weak, and that the Institution should strengthen the orientation and "bonding" of all new employees. Smithsonian management believes, however, that there should be no special effort to nurture this particular group of employees since it might have the unwanted effect of maintaining a sense of "difference." The Institution is making a conscientious effort to eliminate any special reference to these new employees, despite the necessity to tag positions in such a way that the central Personnel Office can maintain suitable data for reporting purposes.

Question 14: The justification (p. 23) indicates that 22 qualified candidates have already been identified for the program and that some have already been appointed to temporary positions. What is the source of FY 1989 funding for those who have already been hired?

Answer: Smithsonian management reprogrammed the necessary funds within the amounts provided to the hiring bureaus for the Federal Employees Retirement System to provide interim funding for these positions.

Question 15 Why couldn't this same funding be used to continue paying their salaries in FY 1990?

Answer: As stated above, the hiring bureau applied a portion of the funding available for the increased costs of the Federal Employee Retirement System for these positions in FY 1989. Since the bureaus will need this funding to cover the costs of the Retirement System for FY 1990 and following years, continued use of this source of funding for these positions is not possible.

New Accounting System

Question 16: The budget (p. 210) requests an increase of $601,000 and 15 FTEs to implement the Smithsonian's new accounting system in FY 1990. As described on page 210 of the budget, the current accounting system is only semi-automated. It would seem that a new, automated accounting system could be operated with fewer employees than are needed for the current system, rather than more. Will the new system increase the productivity of current employees?

Answer: The Smithsonian's accounting system is not adequately serving the needs of the Institution. The current semi-automated system is at capacity. With an expanded computer and software capability we will require additional staff, many with new and different skills, to satisfy processing and reporting requirements currently not being met. There are no staff available to pick up an increased work load. In fact, the opposite is the case. We hope that with the addition of new staff and efficiencies provided by the new accounting system we will be able to solve what has been an ongoing base deficiency in staffing levels vis a vis a more than inflationary growth in expenses and an increasingly burdensome and complex set of federal and non-profit accounting and reporting requirements.

Question 17: What is the basis for requesting the additional 15 FTEs?

Answer: Our needs include 8 full-time positions including two systems/internal controls staff who would establish procedures relating to the new system, one accountant, four accounting technicians, and one records clerk to keep current appropriate documentation. The accountants in addition to correcting a base deficiency vis a vis volume of transactions processed will provide support for the implementation of a technical nature and subsequently for expanded services.

We think we have anticipated all needs. We are being especially cautious as we proceed with implementation of the new accounting system given our experience in moving to the personnel/payroll system at the Department of Agriculture's National Finance Center. This effort took one and a half years and many manhours more than we had planned due to its complexity. We know the new accounting system will be even more complex.

The remaining seven positions are temporary accounting technicians. They will be needed for fiscal year 1990 to relieve the burden that implementation of a new accounting system will place on existing staff. The Institution must maintain the existing level of record keeping and financial services as the implementation proceeds concurrently. The implementation (the process of learning new procedures and ways of doing things, the loading of base data, the testing of hardware and software) as well as the need to run parallel systems for a period of time to assure accuracy creates the temporary workload increase.

These positions will cover the first of several phases of the proposed implementation. It must be remembered we anticipate moving from 1960's technology to that of the 1980's. Phase I will see utilization of a new general ledger, automated accounts payable and purchasing, and an enhanced budget projection system. As we get closer to implementing Phase I, we will be able to more accurately determine staffing needs.

Question 18: Part of the increase is earmarked for 7 temporary accounting technicians. Has the Smithsonian explored the possibility that a temporary accounting service might be able to provide the needed services, at less cost and with more flexibility?

Answer: We have from time to time reviewed the option of using temporary accounting services and have used such services. However, in this case the work does not lend itself to using this type of service. Continuity and commitment on the part of employees is critical to the process and success of implementation and documentation of a new system. It is our view that the potential for continuous retraining, lost time, and redundant or duplicate work efforts would likely result in increased costs and a slower implementation.

Utility Increases

Question 19: The justification (p. 30) indicates that, in FY 1990, the D.C. Government will begin to bill Federal agencies directly for the cost of water and sewer services. I understand that these costs were previously covered in the D.C. Appropriation Bill. Your budget includes $3,675,000 for these payments in FY 1990. The Subcommittee was told that the D.C. Government might begin billing you in both FY 1988 and FY 1989, but they did not. What assurance can you give us that this will happen in FY 1990?

Answer: Because the Smithsonian is not directly involved in the legislative authorization process that this proposed change will require, we cannot assess the likelihood of its eventual success or failure in Congress. However, responding to previous Congressional concern about statutory authority, as expressed in the FY 1989 D.C. Appropriations Act, the President has proposed legislation that would allow, beginning in FY 1990, the District of Columbia to accept payment for water and sewer services directly from "individual Federal establishments in the Judicial, Legislative and Executive branches of government."

Question 20: How did the Smithsonian arrive at the figure of $3,675,000? You may provide the precise computation for the record.

Answer: The Smithsonian's Office of Plant Services based the projected costs of D.C. water and sewer services to the Institution for FY 1990 on the consumption and usage levels and rates provided by the D.C. government.

Question 21: Do you know if the D.C. Government budget shows a decrease in FY 1990 for this item?

Answer: The Budget of the United States Government, 1990-Appendix, which contains the detail of the budget by appropriation account, indicates that the budget request for the D.C. Government reflects the shift in funding for sewer and water costs to the individual Federal agencies.

In the section on the District of Columbia (page I-Z13) the President's budget for FY 1990 proposes the elimination of the appropriation account for the "Federal Payment for Water and Sewer Services," but includes the payment for water and sewer services as a program activity under the appropriation account for the "Federal Payment to the District of Columbia." The Program and Financing table for this appropriation also reflects the financing of this program through the offsetting collection from the individual agencies. An explanatory note to this table stat[illegible] "For 1990, $34.7 million for payment to the District of Col[illegible]a for water and sewer services furnished to facilities of the United States Government will be financed on a reimbursable basis by the agencies receiving these services. The agencies will transfer the amounts from their separate appropriations and other funds available for this purpose."

Question 22: The budget (p. 29) includes a net increase of $87,000 for natural gas. The request reflects an anticipated reduction in consumption and a 15% rate increase requested by the Washington Gas Company in January 1988. What is the cost increase associated with the 15% rate increase?

Answer: Of the $87,000 increase which the Institution is requesting for FY 1990, $82,000 is associated with the 15 percent rate increase for the Washington Gas Company. The balance of the increase reflects the net effects of a currently anticipated base deficiency in the gas account for FY 1989, offset by savings associated with the release of the Radiation Biology Laboratory facility in Rockville, Maryland, and the National Museum of African Art complex on Capitol Hill.

Question 23: Has the Public Service Commission acted on the Washington Gas Company's request?

Answer: Yes, the Public Service Commission approved new rates to go into effect on October 29, 1988. The Institution first learned of this approval in late January 1989 when it received its Washington Gas Company bill for service for October 1988.

Question 24: Will you notify the Subcommittee when the Commission completes action on the request?

Answer: The new rate structures went into effect October 29, 1988.

Asbestos Removal

Question 25: How is the Smithsonian's program of asbestos removal proceeding? When do you anticipate completing the program?

Answer: Since FY 1981, the Congress has provided a total of $4.5 million for asbestos abatement at the Smithsonian. The Institution has conducted asbestos removal or encapsulation projects at a number of facilities, including the American History, Natural History, American Art and Portrait Gallery, Arts and Industries, Smithsonian Institution (Castle), Freer Gallery and Renwick Gallery buildings and the Cooper-Hewitt Carnegie Mansion. In FY 1989, the Institution retained a consulting firm to survey, identify, label and report on all asbestos in major facilities. In addition to recommending actions to take at each contaminated location, the consultant will develop a schedule for removal or containment of the asbestos and an estimate of the annual cost. The consulting firm will complete this comprehensive asbestos survey in FY 1991, and the Institution will then be able to project a completion date for this work.

Question 26: Recently, the Press carried several articles regarding complaints from some of your employees, temporary employees I believe, that they were being required to work in an asbestos-contaminated environment. Would you describe for the Subcommittee the nature of the complaints?

Answer: On November 1 and 2, 1988, a Washington D.C., television station, WJLA-TV, broadcast stories regarding employee complaints about working in the attic areas of the Museum of Natural History, where sprayed-on insulation containing asbestos was present.

The employees involved in the WJLA-TV story were part of the staff that the Smithsonian hired on a temporary basis to carry out various aspects of the Institution's move to the Museum Support Center. The employees involved in the broadcast story apparently felt ill at ease because one of the projects to which the Institution had assigned them involved the cleaning and removal of items from an area in the Natural History Building where sprayed-on insulation containing asbestos was present. The Museum had received no complaint from any of these individuals prior to the TV story. The first indication that such a concern existed came in a phone call from the WJLA-TV reporter assigned to the story.

The nature of the complaints was that those involved were fearful of the presence of asbestos containing materials in their work environment.

Question 27: Has the Smithsonian taken any action to remedy the situation?

Answer: Yes, during the work, the Institution conducted air monitoring in the attic areas of the Museum of Natural History to determine if detectable levels of asbestos were present. The Smithsonian's Office of Environmental Management and Safety took air samples at times when work was in progress and at times when no work was in progress. The results indicated that asbestos levels were below the minimum detectable limit in all samples collected. The Institution is providing a copy of this report to the Subcommittee. It should be noted that it is policy in the Institution to require the use of asbestos protective equipment in all work situations where asbestos fibers may be present. Further, it is standard practice for the Institution to conduct air monitoring on a representative sampling of such work.

In addition, the Institution had taken a number of steps to inform employees, both before and after hiring, about the presence of asbestos in some work areas. Each applicant was verbally informed at the job interview about the presence of asbestos in work areas and the precautions which would be required of them. The Position Description covering these employees described in detail the presence of asbestos containing materials and the protective garb which would be required to be worn. Each applicant was given this Position Description to read at the Interview. After being hired and before being assigned, the Smithsonian's Office of Environmental Management and Safety gave specific training to the employees relative to the work they were to do in areas with sprayed on insulation containing asbestos. In addition, before starting the work, the employees were given a dry run through the work process. This included a step-by-step demonstration of the actual work and the use and handling of the required asbestos protective gear.

After hearing from WJLA-TV that some of our employees were concerned over their work environment, the Smithsonian took immediate steps to try to surface their concerns. The Office of Environmental Management and Safety arranged a private meeting with the Chief of the Environmental Management Division for all employees working in the areas where asbestos was present. At this session, the Office addressed all questions that the staff raised.

After this session, work in the areas where asbestos was present continued for several more days to its conclusion. Although it is not possible to tell if the information which they were given answered the employees' concerns, they did not express any further concerns once the project had ended. The Smithsonian informed each of the employees of their right to file a grievance and the process for doing so. No staff filed grievances.

Regarding the televised stories, the Institution's Office of Public Affairs took exception to them. That Office subsequently sent letters of objection to the Federal Communications Commission and the Station Manager of WJLA-TV, stating the Institution's concerns in detail. The Institution is providing copies of these letters to the Subcommittee.

Polychlorinated Biphenyls (PCB) Transformers

Question 28: At last year's hearing, the Smithsonian indicated that a contract had been awarded to clean up your remaining PCB contaminated transformers by the Spring of this year. How is this work proceeding?

Answer: The contract work is behind the original schedule. The contract is 16 percent complete, with September 30, 1989 as the current completion deadline.

Question 29: Are you encountering any problems?

Answer: Yes. One problem arose due to the high demands that government agencies have made on manufacturers for PCB-free transformers, which have caused delays in the delivery schedules of the new transformers to the Smithsonian. Additionally, work at the National Museum of American History has slowed due to the contractor encountering asbestos in the transformer vault

Question 30: Is the contractor on schedule?

Answer: No, the contractor is not on schedule. The original contract period was March 1988 to May 1989

Question 31: When will the project be finished?

Answer: The current contract completion date is September 30, 1989. This is a full year before the Environmental Protection Agency deadline for removal of PCBs from Federal buildings.

Emergency Repairs

Question 32: Your justification (p. 241) requests $200,000 for emergency repairs throughout the Smithsonian Institution. What was the level of emergency repairs experienced in FY 1987? Please provide a list of the FY 1987 emergency repairs, including a description of each project, for the record.

Answer: In FY 1987, the Institution spent $49,785 out of the $50,000 budget for emergency repairs. A description of each of these projects follows:

Project Description	Cost
Purchase of aerofin cooling coils for the National Museum of American History	$6,752
Purchase stainless steel coil casing for the National Museum of American History	548
Study potential health hazard in East Tower offices in the Arts and Industries Building	1,752
Repair of guardrail on the summit concrete road for personnel safety at the F. L. Whipple Observatory	24,000
Installation of safety barricades at the National Air and Space Museum	16,185
TOTAL	$49,785

In addition to the funding specifically earmarked for emergency repairs, some work related to repairs of an emergency nature is done as part of R&R projects in other categories. For example, in 1988 the Smithsonian used funding for Fire Protection projects in several buildings to pay for the emergency replacement of locking mechanisms on fire doors in these buildings to improve safety of visitors and staff. In order to retain sufficient funding to handle unexpected situations that may develop, especially towards the end of the fiscal year, Smithsonian uses funding from the emergency repairs category only as a last resort, and will use other funding if possible. For instance, over the last several years, the Institution has redirected small residual balances remaining at the conclusion of other projects to fund a number of emergency repair requirements. The Office of Plant Services also uses Salaries and Expenses funds, if available, to make many of the needed repairs that it identifies in the course of routine inspection. Since much of this work is done as part of other projects, there is not a complete listing of emergency repair work funded by other sources.

The increase in funding that the Smithsonian is requesting for FY 1990 will enable it to establish a more adequate base level to fund these emergency repairs. If adequate funding levels are not available in the R&R account to cover emergency repairs, there is a risk of not being able to replace a piece of failed equipment or make a critical safety correction without deferring other much needed repair work.

National Zoo

Question 33: The budget (p. 225) requests $4,500,000 for phase II of the Amazonia Exhibit. When do you expect to complete work on the exhibit and open it to the public?

Answer: Construction will be complete and the exhibit will open to the public in the Spring of 1992.

Question 34: Do you expect to be able to complete the exhibit within the $12,200,000 estimate provided to the Subcommittee last year?

Answer: Yes, $12,200,000 is still our current working estimate for the cost of the exhibit.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Budget Planning

Question 35: As part of the FY 1990 planning and budget process at the Smithsonian, bureau and office directors submitted "operational plans and priorities" for the next five years to members of the Secretary's Management Committee (pg. 2). These plans and priorities were reviewed by the Management Committee who provided written feedback to bureaus. After a further review and refinement, the budgets were submitted. At what point in the process do "operational plans and priorities" become bureau budget requests to the Smithsonian?

Answer: The reference to "operational plans and priorities" that the bureau and office directors submit to central Smithsonian management represents a relatively new step in the Institution's planning and budgeting cycle. The Smithsonian's Office of Planning and Budget introduced this new step prior to FY 1989 budget formulation. This new step created a planning phase that precedes annual budget formulation. During the planning phase, bureaus prepare long range goals and objectives and a set of corresponding action steps, which they prioritize for the next five years. These goals, objectives, and action steps represent "operational plans." Bureaus later submit budget requests for their highest priority action steps if these action steps cannot be undertaken with base resources.

Question 36: What was the amount of the Smithsonian's FY 1990 request of the various bureaus to the Secretary's Management Committee?

Answer: Smithsonian bureaus and offices requested increases totalling over $27 million for support of existing programs and other program initiatives in their budget requests for FY 1990.

Question 37: What was the amount of the Smithsonian's FY 1990 request to OMB for "Salaries and Expenses?"

Answer: Of the $27 million requested by the bureaus and offices the Institution included $12.1 million for new and expanded program requirements in its FY 1990 budget request to the Office of Management and Budget.

Question 38: Generally, what instructions did OMB give you in formulating your FY 1990 request?

Answer: The Institution received no special instructions other than the broad guidance for budget formulation contained in OMB Circular A-11. OMB did provide specific guidance on our FY 1990 Congressional budget request that stipulated that the Institution cover the increased costs of the following items within the President's allowance:

- Federal Employee Retirement System
- Health Insurance
- Security Guard Salary Upgrade
- Annualization of the Partial-Year Costs of the New FY 1989 Positions
- Full-year Costs of the January 1989 Pay Raise
- D.C. Water and Sewer Payments
- Major Scientific Instrumentation

Reinforcement of Administrative Infrastructure (i.e., Accounting System, Financial Analyst, Investigator)
Adjust for reduction in Postage Costs Related to the Proposed Establishment of a Special U.S. Government Mail Class

Base Adjustments

Question 39: The guidance from the Office of Management and Budget mandated that all federal agencies permanently absorb the cost of the January pay raise. According to the Institution's budget, you have elected to apply the additional dollars in the FY 1990 allowance provided for other "inflationary adjustments" to the pay raise. If you are using base adjustments for pay, how do you plan to pay for those adjustments?

Answer: Because of the importance of fully funding personnel, Smithsonian management decided to absorb inflation in nonpersonnel objects of expense. Therefore, the Institution applied the full amount that OMB included in an aggregate calculation as a general inflation allowance for nonpersonnel expenses to cover instead the costs of the pay raise.

Question 40: How did the Institution determine which base adjustments to fund and which base adjustments to reallocate for pay adjustments? Did OMB approve this reallocation?

Answer: In general, OMB provides a degree of flexibility in the passback, as long as the total dollar level of the passback for Salaries and Expenses does not change. The Institution made a general determination that it could better afford to absorb inflation in equipment, supplies and materials than to absorb higher pay costs by holding vacancies for lack of funds. Our OMB examiner approved this reallocation.

Question 41: On page 26, the justification indicates that the total uncontrollable expenses are $7,419,000. An additional $5,606,000 is necessary for the legislated pay requirements. The justification indicates that part of the base adjustments were used to fund the pay costs. Is it accurate to say that the total uncontrollable costs are $13,025,000 ($7,419,000 + $5,606,000)?

Answer: Yes. The total additional funding that the Institution requires for uncontrollable costs above the FY 1989 appropriation is $13,025,000 (approximately 85 percent of the total increase for Salaries and Expenses for FY 1990).

D.C. Government Water and Sewer Payments

Question 42: In the past, the District of Columbia's Federal appropriation has covered the cost of water and sewer service for the Federal buildings in the District (pg. 30). In FY 1990, however, the D.C. government will propose legislation which will authorize them to bill Federal agencies separately. This additional cost of $3,675,000 is considered a base adjustment.

A similar proposal was made by the D.C. government last year but was not enacted. If the legislation authorizing the D.C. government to bill agencies separately does not pass, should the Institution's budget be reduced by $3,675,000?

Answer: If the legislation authorizing the D.C. government to bill agencies separately does not pass, then the Institution will not have to bear these costs for FY 1990.

New Staff

Question 43: The budget for FY 1990 indicates that the Institution has expanded efforts to achieve cultural and ethnic diversity in its professional staff (pg. 3). The Institution feels that a more diverse professional staff will shape future Smithsonian programs and exhibitions to reflect more accurately the nation's cultural and ethnic composition. Twenty-two qualified candidates have been found and some have been appointed to temporary positions. Can you describe the process the Institution went through to determine that the current staff did not represent our nation's composition?

Answer: As described earlier, the Institution strongly oriented the focus for these particular positions toward research/curatorial positions. We have been aware of our under-representation in these occupations for years as a result of our regular reports for the Equal Employment Opportunity Commission (EEOC), which compare our statistics to national labor force. The Institution has good representation in its Clerical and Other positions as defined in the PATCO (Professional, Administrative, Technical, Clerical and Others) categories, but has always been weak ("manifest imbalance") in its Professional category which is of course the area most critical to the mission of the Institution.

Question 44: Does the composition of staff differ from the rest of the nation?

Answer: Low minority and female representation is not unique to the Smithsonian, but true throughout the museum and professional research fields. In 1984, the Commission for Museums for a New Century, established by the American Associations of Museums, underscored this point in its report, Museums for a New Century:

> "We are also concerned about the status of minorities and women in the museum work force. The cultural pluralism that museums celebrate is not manifested in the composition of museum staffs. It is a troublesome truth, not an unfair stereotype, that the museum work force is largely white and dominated in the upper echelons by men. Although there are virtually no quantitative data about the work force in museums, it would be hard

> to dispute the fact that few minorities hold professional positions in museums and few women can be found in high levels of management. ..." (page 82)
>
> The underrepresentation of minorities and women is a complex situation that will not change overnight, but it must change. In a society where occupational stereotypes are at last diminishing, museums must not lag behind. Of equal concern is the effect the composition of the museum work force has on the capacity of museums to show and interpret all facets of our heritage from a fair and balanced perspective." (page 84)

Question 45: What do you mean when you say that a "more diverse professional staff will shape future Smithsonian programs and exhibitions to reflect more accurately the nation's cultural and ethnic composition?"

Answer: The professional staff are those persons responsible for designing exhibitions and public programs, and as long as the staff is primarily composed of males with a Eurocentric background, that bias will likely remain apparent in their selection of program topics and its public interpretation. It is only by introducing other more diverse perspectives into the planning and design process of its exhibitions and programs themselves that the Smithsonian will eventually reflect the diversity of cultural values and attitudes which exist in the population of this country. In order to fulfill its basic mandate of "the increase and diffusion of knowledge," the Institution must find broader ways of defining "knowledge" and other ways to present that knowledge in order to "diffuse" it more widely.

Question 46: Why was a decision made to add staff rather than handle the problem through attrition?

Answer: Turnover at the Smithsonian has historically been very slow. We have researchers here who have been at the Institution for over thirty years. The same is true of curatorial positions. For this reason, if we were to leave this evolution process to normal attrition, the resultant (desired) effects would be even slower and the catalytic aspect much more diffuse.

Question 47: Are you creating positions not contemplated in your five year operational plan?

Answer: The Smithsonian did not contemplate these positions in the Five-Year Prospectus, FY 1989 - FY 1993, which the Regents approved in February of 1988, but has included them as part of the Prospectus for FY 1990-FY 1994, which the Regents approved in January 1989.

Question 48: Has the five year plan been altered for this purpose?

Answer: Yes, as stated above.

Question 49: What are some of the positions to which the 22 candidates have been slated?

Answer: Some of these positions include:

- -- Reference Librarian, Smithsonian Institution Libraries
- -- Archeologist, Museum of Natural History
- -- Anthropologist, Museum of Natural History
- -- Curator, Museum of American Art
- -- Education Specialist, Museum of American Art
- -- Public Program Coordinator, National Portrait Gallery
- -- Program Specialist, Office of Interdisciplinary Studies
- -- Director, Committee for a Wider Audience

Question 50: Is this effort part of the 23 point action plan discussed at last year's hearing?

Answer: Yes, the Institution has developed this effort as part of the 23 point action plan, "Strategies for Affirmative Action Hiring," discussed at last year's hearing.

Question 51: How do these 22 positions relate to the 98 additional workyears requested in FY 1990?

Answer: Twenty of the 22 professional positions require one workyear each. The remaining two professional positions (the two staff scientist positions for STRI) are half-time positions, with one-half workyear associated with each position. In addition, the six support positions require 6 workyears. Therefore, 27 of the 98 additional workyears for FY 1990 are associated with this initiative.

Repair and Restoration

Question 52: The FY 1990 budget requests $26.6 million for the Repair and Restoration account to continue addressing the backlog of maintenance needs. This account is divided into two sub-accounts. The first is called "Major Capital Renewal" and the second is called "Repairs, Restoration and Code Compliance." The "Major Capital Renewal" subaccount is designed for the cyclical replacements of major building systems, equipment and major renovation projects required to assure long-term preservation of the buildings. The Repairs, Restoration and Code Compliance subaccount is designed to meet health and safety needs. Can you elaborate on the distinction between these two subaccounts?

Answer: The primary distinction between these two subaccounts is one of magnitude. Buildings require routine, ongoing repairs in order to ensure continued operation and long term preservation, as well as modifications to meet life safety and health regulations. The routine repairs can range from patching and mending roofs, fences, sidewalks and roadways; refinishing walls, windows and doors; pointing and caulking exterior stone joints; and repairs to heating, ventilating and air conditioning (HVAC) equipment; to replacement of roofs, terrace paving materials, floors, windows, and HVAC equipment and components. Modifications for life safety and health and security purposes include installation of fire detection and suppression systems and removal of hazardous substances such as asbestos.

Periodically, building systems reach the point where no amount of repair or replacement of individual components can ensure continued operation. This is particularly true of heating, ventilating and air conditioning, electrical and plumbing systems, major components for which complete replacement is necessary when they reach the end of their useful life. These large scale replacement projects require large amounts of long term funding, and complex logistical planning to avoid major disruption to programmatic activities. These major replacement projects are requested in the Major Capital Renewal subaccount.

Question 53: Which subaccount is designed to address the backlog of maintenance?

Answer: Funding in both the Repairs, Restoration and Code Compliance subaccount and the Major Capital Renewal subaccount reduces the backlog of essential maintenance and repair. Projects in the Major Capital Renewal subaccount, such as the replacement of the HVAC, electrical and plumbing systems at the Natural History Building, and HVAC replacement at the American History, Arts and Industries and American Art and Portrait Gallery Buildings, constitute more than one-half of the currently defined backlog. The remainder of the backlog work falls in the Repairs, Restoration and Code Compliance subaccount.

Question 54: In a response for the record at last year's hearing, the Institution indicated that the backlog of maintenance and repair was $197 million. $20 million was provided in FY 1989 in the Repair and Restoration of Buildings account, yet the FY 1990 justification indicates that there is still a backlog of $197 million. Was the $197 million estimate updated prior to the printing of the document?

Answer: The Institution updates the estimate for the R&R backlog annually in February. The Institution was not able to include an updated estimate in the FY 1990 budget document. The estimate of the backlog as of February 6, 1989, is $195 million. Although the FY 1989 funding of $20 million reduced the 1988 backlog estimate of $197 million, the facilities inspection program revealed additional items to add to the backlog, as well as some changes to the previously estimated costs of items.

Question 55: In another question for the record at last year's hearing, you pointed out the Institution's plans to request $35 or $40 million annually to eliminate the backlog. Since the request totals $26 million, what happened? Does OMB not agree with the need?

Answer: The Office of Management and Budget has supported the expansion of the Institution's R&R program for the past several years, within the constraints resulting from the tight budgetary situation. Smithsonian management has thoroughly briefed our OMB examiner on the Institution's need for additional resources to repair and restore its aging physical plant. While OMB is sympathetic to the need, the realities of the current economic climate have forced it to hold the R&R account to a slower rate of growth than the Institution believes is necessary. As a result of the Institution's appeal to OMB's initial passback, which allowed an increase of $4.3 million over the FY 1989 level for R&R, OMB approved a further $1.7 million, indicating their endorsement for the need to give greater emphasis to the backlog in the budget.

Question 56: Could the Institution have shifted funding within the OMB allowance to increase the R & R account?

Answer: Technically, yes. The Institution considered such a shift in order to bring the R&R request closer to the optimal level of $35 million given the backlog. However, any significant shift would have reduced the funds within the Salaries and Expenses account to meet uncontrollable expenses, affirmative action responsibilities, research support, collections management, financial management improvements, and R&R support staff. The construction budgets are similarly tight with the Institution requesting funds for only the highest priority needs such as planning for the renovation of the General Post Office Building, critical research support projects at the Tropical Research Institute and development of the Amazonia exhibit at the National Zoological Park. In light of these program and construction needs, the Institution believes that its FY 1990 budget represents a balanced request in the present tight budget situation.

Major Capital Renewal

Question 57: You have requested an additional $9.95 million in FY 1990 for the Natural History Building. Of these funds, $9.0 million is for the first phase of construction and emergency replacement of electrical and HVAC equipment not expected to remain operative throughout the construction period (pg. 233). This effort stems from the ongoing study of the Natural History Museum Building called the "Master Implementation Plan." Of the items listed on page 232, what will the $9.0 million cover?

Answer: The $9.0 million will cover (1) design and construction of chiller plants (air conditioning) and (2) the design of the east and west wing mechanical equipment penthouses.

Question 58: When will the "Master Implementation Plan" be completed?

Answer: The architectural engineering firm contracted by the Institution will complete the Master Implementation Plan by July 1989. The preliminary version of the Plan envisions a schedule that, in coordination with Museum activities, organizes the design and construction tasks into a period of 12 years, ending in the year 2000.

Question 59: What do you anticipate to be the total costs of this effort?

Answer: The architectural engineering firm is preparing a comprehensive estimate of the total cost as part of the Master Implementation Plan. The preliminary estimate is that the cost will exceed $100 million.

Question 60: Are similar planning efforts underway at other museums?

Answer: The Institution has had a similar planning effort done for the American History Building, and renovation is currently underway. In addition, Smithsonian staff have initiated inhouse planning for Major Capital Renewal projects at the American Art and Portrait Gallery Building and the Arts and Industries Building, but we have not retained any outside consultants to date.

Museum Shop Receipts

Question 61: In FY 1989, the Institution anticipates self-generated revenues from various sources to total $192 million and the profits from those receipts are anticipated to total $26.5 million? Can you break down the sources of these revenues?

Answer: The sources of projected revenue are as follows:

	Gross Sales ($000,000)
Smithsonian Magazine	$79
National Associates	21
Resident Associates	6
Air & Space Magazine	8
Museum Shops	29
Mail Order	25
Concessions	4
Product Development & Licensing	1
SI Press	19
	$192

Question 62: What are the allowed uses of these funds?

Answer: The net income from auxiliary activities is allocated annually through our trust fund budget process. Their use is approved each year by the Board of Regents. The net income along with other unrestricted trust funds provide the Institution with supplemental base support as well as that extra margin for experimentation and bold initiatives. These funds are a major source of revenue for the Regents Collection Acquisition program, Scholarly Studies program, Special Exhibitions program, and Fellowship programs. In addition unrestricted funds provide an annual transfer of $3.0 million to build our endowment.

Question 63: What have been the traditional uses of these funds?

Answer: During FY 1988 available unrestricted trust funds from all sources were allocated to Institution wide priorities including $1,883,000 for acquisitions, $3,160,000 for special exhibitions, $2,949,000 for fellowships, $2,950,000 for scholarly research, and $550,000 for educational outreach. Translated into specifics, trust funds purchased a painting for $600,000 entitled "Yliaster" by Mardsen Hartley for the National Museum of American Art, an 1829 portrait of Edward Hicks by Thomas Hicks for $371,250 for the National Portrait Gallery, and a painting by Phillip Guston done in 1976, entitled "Ancient Wall" for the Hirshhorn Museum and Sculpture Garden. Funded exhibitions include "Women in the Progressive Era" at the National Museum of American History, "Beyond the Java Sea" at the National Museum of Natural History and "Photography of Invention" at the National Museum of American Art. 332 interns, graduate students, post doctoral fellows, and visiting scholars studied at the Smithsonian with Institutional support.

Question 64: Since there is such a large backlog of maintenance, has the Board of Regents ever discussed using these profits on that backlog?

Answer: The Board of Regents has given frequent and high priority attention to the R&R account and the backlog of essential maintenance. The January 1989 edition of the Five-Year Prospectus, FY 1990 - FY 1994 contains, at the direction of the Board, an extensive projection of R&R projects for federal funding. The Regents have reviewed different uses for the Institution's Trust funds over the years, but have continued to reaffirm the use of Federal funds as the primary source of support for maintenance.

In 1978, the Board of Regents approved policy guidelines concerning the use of the Institution's trust funds. Prompted by general interest in this matter, the implementation of the Gramm-Rudman-Hollings legislation, and the very limited availability of trust funds in relation to overall needs, at its May 5, 1986 meeting the Board reexamined and reaffirmed its September 25, 1978 policies with regard to the use of appropriated and trust funds. That statement says in part "Federal appropriations are used as the primary source of support for ... maintenance, repair, renovation and construction of facilities ..." and "Physical plant improvements are funded with appropriated funds except when it is determined that the nature of the property, type of improvement, or the urgency of the project makes it appropriate to use unrestricted trust funds or trust funds provided to the Institution for a specific project."

While the Institution has made large application of trust funds to the recent major building projects of the Quadrangle and the National Air and Space Museum restaurant, it is the position of the Board that the care of the physical plant will remain a federal responsibility.

Question 65: Has the Institution staff ever recommended this to the Board? If not, why not?

Answer: The Board of Regents holds the position that the maintenance, repair and renovation of our buildings should remain a Federal responsibility. Because of this and the very limited availability of trust funds, Smithsonian management continues to feel strongly that the use of such funds for building care is neither possible nor desirable.

Question 66: What happened that made you increase your estimate of FY 1989 receipts from $179.7 million to $192.2 million?

Answer: The revenue estimates for our auxiliary activities are influenced by many factors, including the strength of the economy, inflation, projected visitor counts, the success of marketing and advertising, etc. Several of these factors contributed to the increased estimate for FY 1989 gross revenues, and our revised estimate for related expenses reflects a similar increase. However, the original estimate for FY 1989 was developed in April 1987, almost a year and one-half before the beginning of FY 1989. In revising the estimate of FY 1989, we had the benefit of reviewing the FY 1987 actual results as well as more current trends.

Submillimeter Telescope Array

Question 67: Design of the submillimeter telescope array was initiated with funds provided in the FY 1989 appropriations bill. The telescope array will provide the prospect of detecting and studying gas falling into very young stars and will help in acquiring the knowledge of how stars are formed.

The total cost of the project is estimated to be $30 million with an additional 25 percent for a site in Hawaii. Is the $30 million estimate an estimate made in 1987? If so, what is the 1989 estimate?

Answer: Yes; the $30 million figure represents the 1987 estimate and is in 1987 dollars. The 1989 estimate is the same as the 1987 estimate. If, however, we wish to convert this estimate to 1989 from 1987 dollars and consider the mean inflation rate to be 4 percent per year, then the total becomes $32.4 million in 1989 dollars.

Question 68: What do you anticipate will be the total cost by the operational date of FY 1995?

Answer: The estimated total cost of $30 million in 1987 dollars for construction within the continental United States remains valid today. The actual cost will depend on the rate of inflation and the choice of site. If the inflation rate were 4 percent per year through FY 1995 and the site were in the continental United States, then the cost would be slightly under $35 million. For construction on a site in Hawaii, as reported previously, the total cost would be about 25 percent higher.

Question 69: In response to a question for the record at last year's hearing a cost estimate was provided for the telescope array. Please provide an update of that cost estimate as well as an explanation of any changes in the estimate.

Answer: SAO is preparing a new chart, which the Institution will supply to the Committee; only the distribution of costs with respect to time of the individual items will be different from last year's chart.

Question 70: Why is the Institution requesting $1,281,000 in FY 1990 for the array when the estimate included for the record last year indicated that $1,722,000 would be necessary. Is the anticipated design cost dropping from the original $1,722,000 to $1,281,000?

Answer: The request for $1,281,000 for the submillimeter telescope array in the Major Scientific Instrumentation line-item is for non-salary expenses only. In addition, the Institution is requesting $142,000 in the SAO line-item for salaries and related expenses for three persons. The $1,722,000 in the estimate for the record consists of $1,300,000 for non-salary and $422,000 for salary and related expenses. Thus, the difference between last year's estimate and this year's request is $19,000 for non-salary expenses and $280,000 for salary and related expenses. The non-salary expenses difference is small; the salary and related expenses difference is more substantial, and reflects a decision by the Institution to postpone hiring several staff. The effect on the total cost of the project of this postponement will be at most a few percent.

The anticipated design cost has not dropped from the original $1,722,000. However, the distribution of costs with respect to time of the various design sub-tasks will be different.

Air and Space Museum

Question 71: The FY 1989 justification indicated that a study was under way on the possible expansion of the Air and Space Museum. In response to a question for the record at last year's hearing, the Institution indicated that a portion of the $1.0 million requested in FY 1989 for construction planning may be used for the NASM Extension project. What are your FY 1989 plans for the NASM Extension project?

Answer: With $300,000 in FY 1989 construction planning funds, the Institution is initiating a study to evaluate the sites under consideration for locating the proposed Extension, including the Dulles International Airport and the Baltimore-Washington International Airport. In January 1989, the Institution selected an architectural and engineering firm to prepare this study. The firm will provide a summary of the preliminary findings of the site evaluation study in September 1989 and the complete site evaluation report in December 1989.

Question 72: What is included in the FY 1990 budget for the NASM Extension project?

Answer: The Institution has not made a final determination of the distribution of construction planning funding for FY 1990. The purpose behind the Institution's request for Construction Planning resources as a lump sum is to retain flexibility in defining priorities for use of these funds in developing long-range expansion plans. This allows the Institution to conduct detailed planning for development of a range of critically needed new facilities depending upon which of them are more advanced in terms of programmatic concept development and requirements definition. It is likely that the Smithsonian will use some of the FY 1990 Construction Planning funds for this project since its current plans call for initiation of a detailed Master Plan of the proposed NASM Extension in March 1990. The Institution has not yet determined the cost for this planning.

National Museum of American History

Question 73: You have requested an additional $430,000 in FY 1990 for the National Museum of American History (pg. 98 & 102). These funds are requested because the museum has filled its available storage and asbestos contaminated buildings at another location. What are the costs to decontaminate the Silver Hill buildings?

Answer: The Smithsonian has not made a detailed estimate of the costs to decontaminate all the Silver Hill buildings, but a preliminary estimate of the cost to decontaminate one building is in the range of $250,000 to $350,000. This estimate does not include the cost of cleaning the objects now stored in the contaminated building, nor does it include provision of "clean rooms" in which to store decontaminated artifacts while building decontamination is in progress. Both of these items are very costly and the entire decontamination process (including objects and building) takes a number of years and considerable staff time. The National Museum of American History needs storage space immediately to relieve the severely overcrowded conditions of its collections on the Mall. The decontamination of Silver Hill buildings will not result in additional space for these collections.

Question 74: Is there a particular reason why the costs of utilities, security and safety alterations ($183,000) are almost as much as the rent ($247,000)?

Answer: The requested increase of $430,000 provides funding both for the actual space rental and for the support costs to ensure use of this space for the secure storage of museum collections objects. The security and safety requirements essential for collections storage causes the relatively high costs of this support. The Institution will have to cover the cost difference between the level of security acceptable for an industrial storage area and the stricter level of protection required for museum objects ($123,000 for one security post, seven days-a-week, 24 hours-a-day). Other support includes $60,000 for utilities (which the terms of the rental agreement does not cover). The Institution had requested a portion of this increase for the purchase of some collections storage equipment (to allow the Museum to use this space to its fullest capacity) under the initial request, but the Institution will now require the use of that funding to cover the higher salary cost for the security guards because of the recent guard salary upgrade.

Question 75: When will the museum be renovated so these stored items can be displayed?

Answer: The National Museum of American History's Master Coordination Plan encompasses a phased renovation of the building beginning in FY 1988 and running through FY 1992. In addition, the museum will be reinstalling permanent exhibitions and renovating basement spaces, where collections are stored, through FY 1995. As the Museum completes its renovations, it will place some of the stored objects on display, but a significant percentage of the collections will remain in storage. Museums characteristically can display only a small percentage of total holdings. Many of the new exhibits will include newly acquired objects, loans from other museums, as well as owned objects. The museum has a well-documented need for additional permanent offsite storage space.

Question 76: How long do you anticipate the rental agreement will be for the space?

Answer: The Museum will need leased space until permanent replacement storage space is available. The Smithsonian's "Suitland Master Plan" includes the development of a new facility for the Museum to replace the existing primary offsite storage buildings at Suitland, known as "Butler buildings." The Smithsonian's architectural site survey projects that the end of the useful life of these Butler buildings will occur sometime between 1996 and 2000, even with maintenance. The Institution constructed these Butler buildings, providing 110,000 square feet of storage, as temporary structures initially; over the years, they have deteriorated beyond utility for the most part. The Museum will need leased space at least through the years 1996-2000, and the current lease gives the Museum the option to rent through 1997.

Smithsonian Institution Traveling Exhibition Service

Question 77: The Smithsonian Institution Traveling Exhibition Service (SITES) is the largest traveling exhibition service in the world. It draws from Smithsonian collections as well as other museums (pg. 160). In FY 1987, 396 exhibitions were booked around the country and in FY 1988, an additional 333 exhibitions were booked. How does the Smithsonian determine where to book an exhibition?

Answer: Many factors determine where a SITES exhibition will circulate. Because the Smithsonian's traveling exhibitions cover a wide variety of topics and are applicable to museums large and small, the process of booking them involves an institution's subject matter interests, audience needs, financial capabilities, and physical facilities.

These are among the questions that enable SITES to schedule a traveling program that meets the needs of a specific exhibitor:

- Has the exhibitor contacted SITES and lodged a special request for an exhibition? (SITES respects a first-come-first-served ethic in noting expressions of interest.)
- What topics are covered in the exhibition? Do they address the interests and/or concerns of an exhibitor's primary audience?
- How much security does the exhibition require? Is the exhibitor capable of providing adequate guard, light, and climate protection for the show's safekeeping?
- How much space does the exhibition occupy when installed? Does the exhibitor have the gallery and/or display area needed to accommodate the show?
- Can the exhibitor afford the participation (rental) fee? Can the exhibitor afford the one-way outgoing shipping fee (required of all exhibitors)?
- Do the calendar periods of available bookings coincide with openings in the exhibitor's program schedule?
- Does the booking request involve a state or region that is not represented fully in the exhibition's itinerary?
- Has the exhibition tour been arranged in cooperation with an external organization, such as a State Humanities Council, to increase its availability in a given state or region through a consortia of museums that subsidize bookings collaboratively?
- Does the exhibition reach underserved audiences and/or facilities? minority audiences? non-traditional settings? small organizations that usually cannot afford exhibitions without special subsidies?

SITES will then make the final decision on whether a particular organization can fulfill the specific security, environmental, and other requirements necessary to accommodate the particular exhibition.

Question 78: Do you work to attain some sort of geographic distribution?

Answer: As stated above, SITES attempts when booking exhibitions to reach a broad geographic distribution. The leading principle in scheduling a show, however, is to address an exhibitor's specific needs. Providing programs that will help museums and cultural organizations serve their own audiences is SITES' chief responsibility. Increasing the proportion of exhibitions directed to underserved groups -- minority cultures, schools, non-traditional museum audiences -- is another of SITES' key priorities.

The demand for SITES exhibitions varies geographically, independent of SITES' conscious programmatic decisions. While a wide and balanced geographic distribution is desirable, some areas of the country request program services less than others. In some places, for example, constrained economic conditions preclude active participation in cultural programs. Other areas have few or no museums in which to place exhibitions. Still other communities house museums that financially are strapped. Often these institutions prefer to commit their resources to maintaining their own collections, rather than to renting temporary exhibitions. SITES' exhibitor base numbers over 2,000 throughout the country, but external cultural, economic and political factors beyond SITES' control combine to determine the specific regional geographic distribution of that base.

Question 79: Of the 729 exhibitions held during FY 1987 and FY 1988 is there a reason why only 24 were held in the Pacific Northwest? Is attendance a problem?

Answer: The Pacific Northwest is one region of the country with relatively few large metropolitan centers and sparsely located exhibiting organizations. These factors, coupled with problems of economic depression and failing industries, probably account in part for limited exhibition bookings. SITES has noted a marginal increase over the past year in the number of exhibitions booked in Idaho, an apparent exception to this trend. For the most part, however, museums and other exhibitors in the Pacific Northwest find themselves so constrained financially as to prohibit the rental of traveling exhibitions, supporting instead their own basic operations and maintenance costs. Attendance figures by themselves never enter in as a consideration for SITES when booking an exhibition; but museum attendance and local financial support may be key factors to individual museums in their decision as to whether to spend their scarce resources on a traveling exhibition or on their own basic programs.

SITES has begun to investigate ways of reducing exhibit rental fees to increase the availability of Smithsonian exhibitions in economically fragile institutions. Achieving this goal is difficult, however, because SITES must break even on virtually every expense it incurs in producing exhibitions. Accordingly, SITES must recover through its rental fees not only the costs of designing and constructing exhibitions, but also the expenses of maintaining the Trust-funded positions for its full-time professional staff. The total of these costs is roughly three times the amount of support SITES receives in Federal funds.

Minor Construction, Alterations and Modifications

Question 80: In FY 1989 the Minor Construction, Alterations and Modifications category was established and funded with $2,020,000 in the Construction account. The Institution argued, and Congress agreed, that this change would enhance the Institution's ability to make minor alterations to existing space generally used for exhibits.

Language was included in the FY 1989 Conference Report which allowed the Institution to reprogram within this funding if there were higher priority construction needs. What have you allocated for this category in FY 1989?

Answer: The Institution has allocated funds in the Minor Construction, Alterations and Modifications category to the following projects:

NMAH Mezzanines	$370,000
NMNH Space Modifications	$230,000
A&I Bldg Space Modifications	$660,000
AA&PG Portico Lighting	$35,000
NASM East Wing Space Modifications	$215,000
STRI Gamboa Dock Replacement	$300,000
SAO Communication Network	$120,000
Archives Storage Building	$15,000
NMNH Photo Lab Improvements	$75,000
Total	$2,020,000

Question 81: What is the distinction between this category and the Repair and Restoration of Buildings?

Answer: The Minor Construction, Alterations and Modifications category in the Construction account includes projects to provide adequate and appropriate space for ongoing programmatic activities rather than to satisfy repair or preservation considerations. Projects generally involve changes or renovations to existing space or minor additions to space of under $1 million. The Repair and Restoration of Buildings account provides funding exclusively for those projects that the Institution requires to ensure the continued efficient operation of building systems and equipment, long term preservation of interior and exterior components, and modifications to buildings to meet life safety and health codes and security requirements.

Question 82: How much of the FY 1989 funds do you anticipate obligating in FY 1989?

Answer: The current estimate is that the Institution will obligate about 65 percent of the Minor Construction, Alteration and Modification funds this year.

Question 83: Please provide for the record an analysis of the use of the FY 1989 funds.

Answer: The following is an analysis of projected FY 1989 obligations by project for FY 1989 funding in the Minor Construction, Alterations and Modifications category. Progress in four of these projects (NMNH Office Space Modifications, NASM East Wing Space Modifications, STRI Gamboa Dock and OPPS Photo Lab Improvements at NMNH) has been slower than the Institution originally anticipated. While these four projects are currently under design, contract documents will not be ready in time to complete a contract award this year. The Institution will award the contracts in early FY 1990.

Project	FY 1989 Budget Authority	Projected FY 1989 Obligations
NMAH Mezzanines, All Floors	$370,000	$370,000
NMNH Office Space Modifications	230,000	23,000
AIB Misc. Space Modifications	660,000	660,000
AAPG South Portico Lighting	35,000	35,000
NASM East Wing Space Modifications	215,000	43,000
STRI Gamboa Dock	300,000	30,000
SAO Communication Network	120,000	120,000
SIA Storage Building Renovation	15,000	15,000
OPPS Photo Lab Improvements, NMNH	75,000	5,000
TOTAL	$2,020,000	$1,311,000

National Zoo--Amazon Exhibit

Question 84: In FY 1989, $3.2 million was provided to begin construction of an exhibit duplicating a portion of the Amazon river. The FY 1989 funds were to be used to modify the existing polar bear exhibit and the FY 1990 request of $4.5 million is for actual construction. How much of the $3.2 million do you anticipate obligating in FY 1989?

Answer: Of the $3.2 million, the NZP anticipates obligating between $75,000 to $100,000 to complete the design work and to fulfill the horticulture needs of the exhibit. The Zoo will combine the balance of the FY 1989 funding with the FY 1990 funds to award the construction contract early in the first quarter of FY 1990. This approach will give us the most efficient use of the funds available.

Question 85: Is the total cost of the exhibit still $12.2 million?

Answer: Yes, this is still our working estimate for the complete exhibit.

Question 86: Are there any additional enhancements anticipated?

Answer: The Zoo does not anticipate any major enhancements. Since the exhibit will feature the latest ongoing research in tropical biology, the Zoo will update it regularly.

Question 87: Please provide for the record a breakdown of the work schedule and funding requirements for this exhibit.

Answer: July 1989 - design complete (previously funded)

October 1989 - award the construction contract for the Amazonia Exhibit (FY 1989 and FY 1990 appropriation)

October 1990 - award the construction contract for the Amazonia Gallery (to be funded with non-appropriated funds)

Spring 1992 - opening of the complete Amazonia Exhibit

Child Care Center

Question 88: What is included in the FY 1990 budget for the Child Care Center?

Answer: There is no funding in the FY 1990 budget for the Child Care Center. The first Smithsonian Child Care Center opened in the Museum of American History in the fall of 1988. The second center will open in the Arts and Industries Building. The Institution will award contracts for the design and construction of the second center this fiscal year using funds appropriated in FY 1989 for this purpose.

General Post Office

Question 89: In 1984, the President signed legislation authorizing a transfer of the General Post Office Building from the General Services Administration to the Smithsonian Institution without reimbursement. The occupants of the building have moved out of the building and the GSA is in the process of transferring custodianship of the building to the Smithsonian.

In FY 1990, $1,750,000 has been requested for renovation design for the building. In addition, as I understand it, you are also in the process of performing a "use study" of the building prior to occupancy. What is the status of the transfer?

Answer: The General Services Administration has not transferred the building to the Institution and continues to use it effectively as temporary housing for employees of other agencies. The

Smithsonian has agreed that continued temporary occupancy of the building is beneficial from a safety and deterioration standpoint until renovation can begin.

Question 90: Why are you requesting funds for renovation design when the use study is ongoing?

Answer: Over the past five years, the Institution has gathered substantial information on the building's history and possible uses. The Institution is presently refining this information with affected bureaus and offices and by the end of FY 1989 will have determined specific program requirements for the building. As envisaged at present, the building will house the significant archival, graphic arts, and special manuscript collections of the Smithsonian. In addition, space will be available for scholars who require access to these collections including several specific documentary history projects. In addition, the Institution will establish common use facilities for paper conservation, photography, etc. to meet remedial needs of a number of Institutional bureaus and offices. Planning will also give careful consideration to developing appropriate public spaces in the facility for exhibition and education. The Institution believes that it can best accommodate these activities in the GPO Building for both programmatic and fiscal reasons. Such a solution would solve many institutional problems and provide a reasonable cost alternative to implement.

Question 91: Has the Smithsonian performed a cost/benefit analysis comparing renovation of the building by us to selling the building to a private firm and then leasing the renovated space from the private owner?

Answer: We have had very informal discussions with a developer as to a possible collaborative arrangement for some commercial use of the building in return for its renovation. The relatively small size, configuration and historic character of the building appear to rule out such an arrangement. We have not considered a sale with a lease back or lease purchase provision. While we think we could handle a potential public outcry at the prospect of selling an historical landmark Federal building, the long term costs of such a arrangement would be very large. Even assuming a straight-line cost of $30.00 per square foot, the rental cost of this 160,000 square foot building over 30 years could be $150 million.

QUESTION SUBMITTED BY SENATOR TED STEVENS

Question 92: "Russian America: The Forgotten Frontier" will open in the summer of 1990 in Tacoma, as part of the activities surrounding the Soviet-American Goodwill Games, and will travel in the fall of 1990 to Anchorage, where it will be part of our celebration of the 250th anniversary of Bering's discovery of Alaska. This exhibit is the first-ever showing of the record of Russian activity in North America from Bering Strait to Baja California, and will occupy 4000 square feet, with 200-300 artifacts, illustrations, dioramas, and audio-visual presentations.

In addition, the "Crossroads of the Continents" exhibit which is now at the Smithsonian will travel to Alaska in 1991. My question is whether the Smithsonian can assist with transportation costs for these two exhibits ("Russian America" and "Crossroads"), and what those costs are expected to be?

Answer: The shipping of "Crossroads of Continents" -- complex in its size, diversity of materials, tour length (six years throughout the United States and Soviet Union) -- is a particularly expensive and demanding undertaking. Through SITES, the Smithsonian already is absorbing substantial shipping costs for this project.

At this time, the Institution is still assessing the full impact of unforseen packing costs -- expenses that could result from additional crating and shipping needs. The exhibition's full itinerary also is not firmly in place. SITES has calculated the transportation costs for this exhibition not only according to the expenses required to move "Crossroads" from site-to-site, but also to the time and travel costs of couriers, conservators, and registrars who must accompany the show to each location.

Shipping: SITES estimates that the shipping of "Crossroads" from place to place will cost $673,300. Included in this amount are the costs for exclusive-use, climate-controlled vans, which alone will require $285,000. We anticipate that the shipping of objects to and from Smithsonian conservation laboratories for refurbishment at mid-tour will cost an additional $10,000.

Curatorial/registration travel: SITES anticipates that the travel costs for staff to pack, unpack, and prepare each shipment for travel will cost $24,000 for the North American leg of the tour.

Staff time: To accomplish an undertaking so complex as "Crossroads" will require the staff time of several registrars and assistants, as well as curators who will need to perform functions different from those involved in research and planning at the front-end of the exhibition. SITES will assign its own registrarial staff and also will contract for outside assistance to accomplish the many tasks at hand. Federally-funded SITES positions, pro-rated to reflect work on this tour (fiscal years 1989 through 1994), will total approximately $175,400. Staff time funded through rental fees and outside grants will total approximately $178,900.

How these costs will be paid: The Smithsonian is contributing towards these services in two ways; first, through the funding of Federal staff members' salaries working on this project ($175,400). Second, through rental fees and funds that SITES has raised specifically for "Crossroads" ($212,900). The six host museums on the U.S. tour will bear the remaining funding requirements of $285,000 in the form of pro-rated shipping costs. Since the Smithsonian's National Museum of Natural History is the first exhibitor on the tour, the Smithsonian will also pay for its portion of these pro-rated expenses.

SITES is unaware of an exhibition called "Russian America: The Forgotten Frontier," but as part of the activities surrounding the Goodwill Games in 1990 in Seattle, SITES is organizing an exhibition entitled "Treasurers From Moscow." This exhibition of decorative objects and other works from Moscow's preeminent fine arts museums and cultural institutions will open in the summer of 1990 at the Seattle Center, in cooperation with the Seattle Organizing Committee of the Goodwill Games and the Seattle Art Museum. A single corporate sponsor will provide funding for the Seattle showing.

Of the 150 items in this exhibition, more than half are Kremlin-owned and represent the highest level of national treasures in the Soviet Union. Included are icons, illuminated manuscripts, porcelains, glassworks, furniture, textiles, costumes, arms and armor. Because the Soviet Ministry of Culture will not allow these artifacts to reside outside the USSR for more than eight months, a multi-site tour throughout North America is not possible. However, the loan period will permit one additional showing at the Smithsonian. Fundraising for the Washington leg of the tour currently is under way.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Question 93: Mr. Adams, I know I speak for my colleagues when I tell you how very fortunate we and our families know we are to live in the city that headquarters the Smithsonian Institution. I was truly amazed at the extent of the Smithsonian programs and activities as I prepared for this hearing.

One program I am particularly fascinated with is the Smithsonian Institution Traveling Exhibition Service, or SITES program, which as I understand it, has been in operation since 1952. According to your budget justifications, New Mexico had 11 SITES bookings in FY 1988 when 98 exhibitions toured the United States. In addition, you anticipate that 53 new exhibits will begin their tours in FY 1989 and FY 1990. For my own interest, could you provide me with a list of the exhibits that went to New Mexico and where they were shown?

Answer: During FY 1988, seven New Mexico institutions offered a total of 11 bookings of SITES exhibitions as part of their exhibition programs. In addition, SITES worked with the New Mexico State Council on the Humanities, which underwrote one of these exhibitions, "Spectacular Vernacular: Traditional Desert Architecture," to promote a coordinated series of multiple bookings of this exhibition.

SITES' work with New Mexico's State Council on the Humanities to facilitate state-wide exhibition partnerships is a model that SITES is now applying in several states across the country. Under this arrangement, SITES carries out consecutive exhibition bookings in a given region. The State Humanities Council then underwrites the collective participation and shipping fees. In some cases, SITES and Council representatives also bring together staff from the various museums in the state or region to develop specific educational programs related to the content of the exhibition.

Following is a list of SITES exhibitions in New Mexico:

Exhibition Title	Museum/City
"After the Revolution: Everyday Life in America, 1780-1800"	Aztec Museum Association (Aztec)
"Long Road Up the Hill: Blacks in the United States Congress"	Albuquerque Public Library (Albuquerque)
"Master Watercolors and Drawings from the Norton Gallery of Art"	Albuquerque Museum (Albuquerque)
"Power and Gold: Jewelry from Indonesia, Malaysia, and the Philippines"	Albuquerque Museum (Albuquerque)
"Santa Fe Trail: Photographs by Joan Myers"	Farmington Museum (Farmington)
"Spectacular Vernacular: Traditional Desert Architecture"	Maxwell Museum of Anthropology (Albuquerque) -Double Booking
	Farmington Museum (Farmington)
	New Mexico State University Museum (Las Cruces)
	Museum of New Mexico (Santa Fe)
"Vietnam Veterans Memorial"	Albuquerque Public Library (Albuquerque)

Question 94: As part of your work on the Christopher Columbus Quincentenary celebration, you also anticipate having SITES exhibits. How will you promote these exhibits to ensure their maximum exposure to the American public? Do you expect these exhibits to have a wider distribution than the Smithsonian's current exhibits?

Answer: In response to exhibitor demand nationwide, SITES is currently developing several exhibitions relating to the Columbus Quincentenary (subject to the Institution obtaining sufficient funds to complete development and production costs):

- "Columbus in America" examines the iconography of Christopher Columbus and the ways in which his name and image have been used throughout the Americas.
- "Contrasts: 40 Years of Change and Continuity in Puerto Rico" reveals changes in the Hispanic cultures of Puerto Rico, captured through the camera lens of Jack Delano between the 1940s and the 1980s.
- "Paintbrush Diplomacy: Children's Art from the Americas" explores the diversities and similarities of societies

throughout the Americas and the Caribbean, translated through artworks by school children. It also examines European influences on these cultures and how ethnic groups have assimilated throughout the continents.

- "Seeds of Change," a traveling version of the Quincentenary exhibition from the National Museum of Natural History, looks at the introduction and impact of plant and animal species into the Americas as a result of Columbus' discovery voyage.
- "Where Next, Columbus?" is a traveling exhibition based on the Air and Space Museum's major Quincentenary exhibition. The show examines the technological dimensions of Columbus' voyage and discovery, and applies those factors onto the prospects for space exploration during the next 500 years.
- Finally, SITES plans to organize a series of low-cost panel exhibitions for history and university museums that examine Quincentenary issues as matters of debate, rather than as conclusions about an historical epoch.

Recently, the National Hispanic Quincentennial Commission brought to SITES' attention an exhibition from the Museum of International Folk Art in Santa Fe, New Mexico. Entitled "Familia y Fe" (Family and Faith), it spans four centuries of life among Hispanic communities and examines how, since the time of Columbus, they have withstood the influences of cultural, political, and social change. SITES currently is analyzing the possibility of working with the Folk Art Museum and Hispanic Quincentennial Commission to co-develop and promote this show.

Promotional efforts to book these exhibitions will follow SITES' regular procedures: targeted mailings to exhibitors with interests and/or audience needs that correspond to the content of the shows; yearly announcements in Update and quarterly promotions in SITES' newsletter SITELINE; and everyday contact either by telephone or in person. SITES also intends to promote these shows by working with State Humanities Councils. SITES will dedicate blocks of an exhibition's itinerary to one state, in return for Council backing for participation and shipping fees.

If the present inquiries for Quincentenary exhibitions are a trustworthy gauge, then the demand for the SITES programs noted above will continue to be very strong. Even rural sections of the country have begun to request programs involving Quincentenary themes. While SITES does not anticipate being able to answer all requests, it is confident of making an important educational contribution to this period of historic celebration.

Question 95: On page 256 of your budget justifications, you indicate that two of the Columbus Quincentenary activities you plan through the National Museum of American History is "a series of public programs in Hispanic American history," and a major permanent exhibit titled "American Encounters" that will, among other topics, emphasize the development of Hispanic culture in the United States. Could you give us a few details on these initiatives?

Answer: The Museum of American History will present these series of public programs in Hispanic American History through a new initiative which it has established, the Program in Hispanic American History. This program, modeled on the Museum's successful Program in Black American History, will be a research-based, scholarly program which will conduct research into important topics related to the history of the development of Latino culture in the United States and present the results of the research to the public in a variety of formats: conferences, lectures, concert/colloquia, performances, and seminars at NMAH and other appropriate locations; publications; and, occasionally, exhibitions, some of which may circulate nationally as SITES exhibitions. The Museum will develop the precise program content with the assistance of a national advisory committee made up of twelve Latino scholars in the fields of history, anthropology, folklife, sociology, and political science.

"American Encounters" will be a major exhibit which will open in March 1992, on the Museum's second floor. The exhibit is about the variety of patterns of cultural inter-relationships that developed between Europeans, Indians, and Africans on the North American continent as a result of Columbus's arrival in the New World. The exhibit will look at particular places where significant inter-relationships developed in the 17th century, including St. Augustine, Florida, the oldest Hispanic settlement in the United States, and Pecos Pueblo in New Mexico. The exhibit will use archaeological material from those sites and other material from the NMAH collection to illustrate those inter-relationships. The exhibit, for which a final script will be ready in April, 1990, may also look at sites where cultural interaction has taken place in the 18th, 19th, and 20th centuries. Sites under consideration that relate to Hispanic culture are the lower Rio Grande Valley of Texas; Los Angeles, California; and Miami, Florida.

Question 96: I note that on page 5 of your opening statement you raise concerns about the existing budget climate. You indicate that FY 1990 will be a "critical year" for the development of your program to celebrate the Columbus Quincentenary. The FY 1990 budget request totals $613,000 in Federal funding for these programs, which is the same as the FY 1989 level. As you see it, is this request sufficient to support the program in FY 1990?

Answer: The budget request of $613,000, which simply maintains FY 1989 base funding, is not sufficient to support the Institution's Columbus Quincentenary Program in FY 1990. Over the past few years, with Congressional support, the Smithsonian has put into place the planning and development framework for this program. The Institution has provided increasing increments of Federal funding, coinciding with the increasing pace of Quincentenary Program activity as the actual date of the commemoration grows near ($170,000 in FY 1987, $340,000 in FY 1988, and $613,000 in FY 1989). With the Columbus Quincentenary now imminent, FY 1990 will be a critical year to ensure continued development of these programs. Within the constraints of a "current services" budget, OMB disallowed the Institution's additional funding request (totalling an additional $1.123 million) for FY 1990. The implications, naturally, are for reductions in the scope of our planned programs for the Quincentenary observance and a delay in implementing a permanent program on the history and cultures of the Americas, as Secretary Adams stated in his March 3, 1989 letter to Representative Sidney R. Yates, Chairman of the House Appropriations Subcommittee on Interior and Related Agencies, which follows:

LETTER FROM ROBERT McC. ADAMS

March 3, 1989

Honorable Sidney R. Yates
Chairman, Subcommittee on
Interior and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

At last year's hearings you expressed much interest in minority representation and cultural diversity objectives at the Institution. I am taking the liberty of writing to you to put forth a related item that I believe you will find most interesting, namely the Smithsonian's commemoration of the Quincentenary of Columbus' first landing in the New World. As you know, we have set in motion several initiatives that address cultural diversity; our pan-Institutional Quincentenary programs not only address these issues but several others.

Overview of Planned Programs

Before I go any further, let me direct your attention to the enclosed red packet that illustrates our planned programs for the Quincentenary commemoration, many of which have benefited from the funding that you have provided since FY 1987. As you can see, we have devoted a great deal of effort to the planning and development of these programs. I should note that there are two other programs, for which planning began too late for their inclusion in the packet. The first of these is a planned exhibition at the National Air and Space Museum entitled "Where Next Columbus?," which will make the connection between those navigators of 1492 and contemporary space exploration. The second is a collaborative exhibition by the National Portrait Gallery and the National Museum of American Art which will explore the phenomenon of the world exposition, looking specifically at the Columbian Exposition of the last century. Additional complementary activities not listed in the packet include symposia, radio and television programs, recordings, publications and outreach projects -- well over one hundred in all.

Undertaking a pan-Institutional initiative of this magnitude has made us aware of the limitations of our ability, both intellectual and material, to relate the complex history of the last 500 years. There is much research that scholars should have conducted years ago. In this sense, there has clearly been a very limited view of history, and it is certainly telling when our 142-year-old Institution is only now trying to offer a more American approach, rather than the longstanding Eurocentric one, to the last 500 years. Unfortunately, much of what we might have been able to tell by 1992 will have to wait until later.

Underlying Objectives

The Smithsonian's Quincentenary Program falls under the aegis of the Assistant Secretary for Research, but the Assistant Secretaries for Research, Public Service, External Affairs and Museums have been working together closely to ensure that standards by which to assess proposed programs are in place. The Assistant Secretaries have developed a set of guidelines to encourage interdisciplinary collaboration, both with scholars throughout the Institution and with scholars and institutions in other parts of the United States and abroad. The guidelines also encourage broad cultural representation through objectives for wider audience participation. We also want to take every opportunity to ensure that the Quincentenary does not focus solely on the past, but that it reflects contemporary societies and cultures that emerged as the result of the encounter between the Old World and the New World cultures in 1492.

The content of the programs and presentations that we are developing must reflect these guidelines and objectives. As an example of our approach, there are well over 60 representatives from Hispanic, Afro-American, Native American and other groups that work either full-time, part-time, serve on contract, or act as advisors on many of these projects. Scholars from all over the hemisphere have participated in symposia we have held thus far, and we anticipate the involvement of more as we approach 1992.

Research Approach

The Quincentenary also has served as a natural and logical impetus to draw together a more integrative, more international approach to the study of consequences of the Encounter. We are developing a newsletter that will deal with the Quincentenary and will elaborate on research and other issues of concern within the Institution, and describe those Quincentenary initiatives that have drawn us into a network that includes Spain, Portugal, Italy, and the countries of this Hemisphere. I recently hosted, at their request, a dinner for the Ibero-American ambassadors and the cultural attaches, at which prominent Hispanic leaders also were present. It was a working dinner meant to encourage collaboration with these countries and the U.S. Hispanic community. Commissioner Fuster from Puerto Rico and Congressman Esteban Torres, as well as other members of the Congressional Hispanic Caucus, are aware of our efforts. We hope to encourage more such interactions in the future.

We know that the Smithsonian's Quincentenary Program is unique among the numerous commemorations others are planning in the Western Hemisphere and abroad. We have presented our programs to over 22 countries. The enthusiasm about the range of academic disciplines and programmatic perspectives that the Institution accommodates is allowing for a broader and richer exploration of the scientific, cultural, artistic and historical implications of the Columbus voyages. In his statement before the Senate Committee on Foreign Relations, on January 17, 1989, then Secretary of State-Designate James Baker stressed the importance of the Quincentenary and suggested "we embark on a voyage of rediscovery -- of the Caribbean and of South America." At the Smithsonian, we are committed to understanding our neighbors in this hemisphere, and scientific and cultural initiatives are key in this process.

Future Directions

It is my hope that the programs we are developing for the Smithsonian Quincentenary commemoration will help to establish a permanent program focusing on the history and cultures of the Americas. In addition to the exhibitions and publications described in the enclosed packet, the Institution has initiated several programs that lend themselves to a permanent presence after the Columbus Quincentenary commemoration. They include the Program in Hispanic American History at the National Museum of American History, the American Indian Outreach Project, an "Institute of the Americas" and the Smithsonian Quincentenary Council of the Americas. Our Office of Quincentenary Planning is coordinating bureau-based planning for the last three of these initiatives. Let me tell you a bit about each of these initiatives.

The Program in Hispanic American History is specifically focused on the Latino population of this country. Scholarly and public symposia, musical programs, exhibitions, and related publications will focus on topics related to Hispanic culture and history. Similarly, the American Indian Outreach Project seeks to develop programs that will appeal to the interests of American Indian communities. In this case, however, we are planning to circulate exhibitions outside of Washington and to publish related materials for distribution to American Indian students.

We are now looking into the possibility of establishing an entity with the provisional title of "Institute of the Americas," which should facilitate a scholarly exchange concerning intellectual, cultural, ecological and other issues that affect this hemisphere. This issue-oriented approach can help to solve such problems as those we are presently witnessing concerning the exploitation of our natural and cultural resources. Non-Smithsonian scholars and policy makers will come to the Institution to pursue research in these fields and to share their ideas and perspectives with Smithsonian staff. We currently plan first to create a Quincentenary Council of the Americas in support of the Quincentenary and then found the proposed "Institute." We are identifying prominent businessmen and scholars from the United States, Latin America and the Caribbean to serve on this Council. In this capacity, members will establish goals, identify problems and issues on which to focus, and help to raise money for the Institute.

Conclusion

With the Columbus Quincentenary fast approaching, FY 1990 is a critical year to ensure continued development of these programs. However, within the constraints of a "current services" budget, OMB disallowed requested funding totalling an additional $1.123 million for FY 1990. The implications, naturally, are for reductions in the scope of our planned programs for the Quincentenary observance and a delay in implementing a permanent program on the history and cultures of the Americas.

Because of your continued interest in multi-cultural programming, minority representation and cultural diversity within the Institution, I have taken this opportunity to provide this status report on our Quincentenary programs. If you would like further information on these programs and their future funding requirements, I would be glad to arrange a more comprehensive presentation in person at your convenience. In the meantime, I have enclosed some attachments that I think you may find useful. I look forward to further discussion.

Sincerely,

Robert McC. Adams
Secretary

Attachments

Attachment 2

SMITHSONIAN INSTITUTION
COLUMBUS QUINCENTENARY PROGRAMS
PROJECTED FEDERAL FUNDING REQUIREMENTS FOR FY 1990

	FTE	$000s
Tropical Research Institute		
* FY 1990 Cong. Request	0	0
* FY 1990 OMB Request	1	40
Additional Funding Required	1	40
Office of Museum Programs		
* FY 1990 Cong. Request	0	0
* FY 1990 OMB Request	0	0
Additional Funding Required	0	0
National Museum of Natural History		
* FY 1990 Cong. Request	1	130
* FY 1990 OMB Request	2	715
Additional Funding Required	1	585
National Air And Space Museum		
* FY 1990 Cong. Request	1	41
* FY 1990 OMB Request	1	47
Additional Funding Required	0	6
National Museum of American History		
* FY 1990 Cong. Request	2	125
* FY 1990 OMB Request	4	510
Additional Funding Required	2	385
National Museum of American Art		
* FY 1990 Cong. Request	0	25
* FY 1990 OMB Request	1	45
Additional Funding Required	1	20
National Portrait Gallery		
* FY 1990 Cong. Request	0	15
* FY 1990 OMB Request	0	15
Additional Funding Required	0	0
Hirshhorn Museum & Sculpture Garden		
* FY 1990 Cong. Request	0.5	20
* FY 1990 OMB Request	0.5	20
Additional Funding Required	0	0

SMITHSONIAN INSTITUTION
COLUMBUS QUINCENTENARY PROGRAMS
PROJECTED FEDERAL FUNDING REQUIREMENTS FOR FY 1990

	FTE	$000s
Cooper-Hewitt Museum		
* FY 1990 Cong. Request	0	24
* FY 1990 OMB Request	0	24
Additional Funding Required	0	0
Traveling Exhibition Service		
* FY 1990 Cong. Request	0	55
* FY 1990 OMB Request	0	55
Additional Funding Required	0	0
Office of Quincentenary Planning		
* FY 1990 Cong. Request	0	50
* FY 1990 OMB Request	1	102
Additional Funding Required	1	52
Office of Folklife Programs		
* FY 1990 Cong. Request	0	90
* FY 1990 OMB Request	1	125
Additional Funding Required	1	35
Office of Interdisciplinary Studies		
* FY 1990 Cong. Request	0	0
* FY 1990 OMB Request	0	0
Additional Funding Required	0	0
Office of Elementary & Secondary Educ.		
* FY 1990 Cong. Request	0	38
* FY 1990 OMB Request	0	38
Additional Funding Required	0	0
TOTAL, QUINCENTENARY PROGRAMS		
* FY 1990 Cong. Request	4.5	613
* FY 1990 OMB Request	11.5	1,736
Additional Funding Required	7.0	1,123

NATIONAL GALLERY OF ART

STATEMENT OF J. CARTER BROWN, DIRECTOR

ACCOMPANIED BY:
DANIEL HERRICK, TREASURER
WILLIAM H. ROACHE, BUDGET OFFICER
ROGER MANDLE, DEPUTY DIRECTOR
ANNE B. EVANS, ADMINISTRATOR
PHILIP C. JESSUP, JR., SECRETARY-GENERAL COUNSEL

PREPARED STATEMENT

Chairman BYRD. The National Gallery of Art now is present. The principal witness is the Director of the National Gallery of Art, J. Carter Brown.

Mr. Brown, would you introduce your associates for the record, and your complete statement will be included in the record. And, tell us what's happening.

Mr. BROWN. I'll be very pleased to, Mr. Chairman.

To my left is Daniel Herrick, our Treasurer.

To his left, Anne Evans, our Administrator.

And to my right, the Budget Officer, William Roache.

Chairman BYRD. Would you like to proceed with your statement?

Mr. BROWN. We submitted for the record a summary statement, Mr. Chairman. I might supplement that briefly, if I could.

Chairman BYRD. Very well, that will be included in the record.

[The statement follows:]

STATEMENT OF J. CARTER BROWN

The National Gallery's Federal funds budget request for the fiscal year 1990 is $42,681,000—a net increase of $3,950,000 over the 1989 budget of $38,731,000. Comprising the total increases are: personnel compensation and benefits—$1,941,000; rents, communications and utilities—$330,000; equipment, materials, supplies, and services—$124,000; repair, restoration and renovation—$1,555,000. The budget includes 883 full-time permanent positions with an OMB limitation of 852 FTE (full-time equivalent) employment, and does not project any increased staffing in fiscal year 1990.

Attendance at the National Gallery has been at a high level in recent years. In fiscal year 1988 the attendance was 7,123,926. The primary reason for the continued high attendance can be attributed to the enthusiasm of the public for our special exhibitions such as the Gauguin, Sweden, O'Keeffe, and Fitz Hugh Lane exhibits.

Forty-nine percent ($1,941,000) of the total increase is associated with personnel compensation. This increase provides: $287,000 for mandatory within-grade and wage-board step increases and merit pay; $187,000 for increased costs of Health Benefits; $1,024,000 for annualization of the fiscal year 1989 pay raise; $44,000 for increased costs of workers compensation; $34,000 for annualization costs of 5 new positions approved in fiscal year 1989; $806,000 for increased costs of special pay rates for security guards. Offsetting these increases are a $375,000 reduction created by the elimination of summer evening hours to enable the Gallery to absorb part of the increased costs of the current year pay raise, and a $66,000 reduction in costs of the Federal Employees' Retirement System (FERS).

Thirty-nine percent ($1,555,000) of the total increase is requested for the Repair, Restoration and Renovation of Buildings Program approved by OMB and included in the President's budget for fiscal 1990. This overall program includes the National Sculpture Garden and sculpture galleries, environmental work, energy management, remodeling to better utilize existing space, new lighting systems in public galleries, and general repairs. In addition, there is a need to replace an antiquated telephone switch which serves both buildings, and take the first steps in two multi-year projects as follows: (1) replacement of the West Building skylights over a 5-year period; (2) installation of a centrally controlled energy management system over a 3-year period.

Eight percent ($330,000) of the total increase is required for the increased costs of rents, communications and utilities. This amount consists of $397,000 to cover water and sewer costs in keeping with the Administration's desire to bill individual agencies for their usage; $89,000 to cover increased costs of structural rental rates; all partially offset by an expected $156,000 decrease in the costs of steam and electricity.

Three percent ($124,000) of the total increase is needed to cover added quantities and increased costs of equipment, materials, supplies and services in support of the basic Gallery operations. This amount consists of $126,000 for services; $15,000 for equipment; offset by a decrease of $17,000 for supplies and materials.

The 1990 Federal funds budget request also includes $2,370,000 for our special exhibitions program at the same level as the preceding year.

BIOGRAPHICAL SKETCH OF ROGER MANDLE

Born: New Jersey, 1941.

Graduated: Williams College 1963, cum laude; New York University 1967, M.A., Certificate Museum Training. Internships: Metropolitan Museum of Art, New York Victoria and Albert Museum, London 1966-67 field—Dutch art, particularly 18th century.

AWARDS

Andover Teaching Fellowship, 1963.

Ford Foundation Museum Training Fellowship, 1966.

National Endowment for the Arts Fellowship, 1974.

Phi Kappa Phi—Honorary member.

American Hellenic Educational Progressive Association Award for outstanding contribution to the cultural world for organizing the major exhibition El Greco of Toledo.

Ohio Art Education Association—Distinguished Citizen for Art Education Award for 1983.

Ohio Senate Resolution for leadership in organizing the first major international exhibition of El Greco's paintings.

1983 Governor's Award, State of Ohio (one of seven)

Honorary Doctor of Fine Arts Degree from University of Toledo, 1983.

"Marketer of the Year" by the Northwest Ohio Chapter of the American Marketing Association, 1983.

Knight of the Order of Isabel the Catholic awarded by His Majesty Juan Carlos, King of Spain, 1985.

Honorary Doctor of Fine Arts Degree from Kenyon College, Gambier, Ohio, 1986.

POSITIONS HELD

Associate Director, Minneapolis Institute of Arts, 1967-74.

Associate Director, The Toledo Museum of Art, 1974-76.

Director, The Toledo Museum of Art, 1977-88.

Deputy Director, National Gallery of Art, 1988-present.

PROFESSIONAL ASSOCIATIONS (SINCE 1974)

American Association of Museums (1974-), President's Committee on Constitution, Legislative Committee; Advisory Committee on Publication regarding changes in Tax Law affecting gifts of appreciated property; Advisory Committee for Museum Assessment Program.

AAM/ICOM, Board of Trustees (1981-82).

American Arts Alliance, Policy Committee (1983); Board of Trustees (1986).

The American Federation of Arts, Chairman of the Executive Committee (1987-).

American Society of 18th Century Studies, National Treasurer; President, Midwest (1978–1982).

Art Against Aids, Committee Member (1987-).

Art Museum Association (1977), Member of Board of Trustees; Secretary (1983); Vice-President (1985); President (1986).

Association of Art Museum Directors, Secretary, Professional Practices Committee; Government Relations Committee; Chairman, Professional Development Committee; Chairman, Ad Hoc Committee of the Future of Government Support of the Arts and Humanities.

Charles Hosmer Morse Foundation, Inc. Advisory Board (1986-).

College Art Association (1967–74).

Council on Museum and Education in the Visual Arts, Founding Trustee.

The J. Paul Getty Trust, Advisory Committee on Museum Management (1984).

Intermuseum Conservation Association, Executive Committee (1977).

International Exhibitions Foundation, Trustee (1984-); Chairman, 20th Anniversary Committee (1985).

Kerr Foundation, Oklahoma City, Oklahoma, Consultant (1988).

Museum Management Institute (U.C. Berkeley) Advisory Panel (1984–86); Senior Museum Associate (1987–88).

National Endowment for the Arts, Museum Program Advisory Panel (1986-); Member, National Council on the Arts (1988–94).

National Endowment for the Arts and Humanities, Panelist and Reviewer.

National Museum Act, Member of the Advisory Council, Smithsonian Institution (1983–85).

National Museum of Western Art, Tokyo, Japan, Organizing Consultant, El Greco Exhibition (1984–86).

Netherlands-American Amity Trust, Inc., Chairman, Cultural Advisory Council.

Ohio Arts Council, Council Member (1985–88).

Ohio Foundation for the Arts, Vice President; Co-chairman, Visual Arts Advisory Committee (1976–77).

Restoration of Toledo, Spain, Chairman, United States Committee (1982).

Spanish Foundation for the Restoration of Toledo, Spain, Permanent Trustee (1982-).

Sterling and Francine Clark Art Institute, Trustee 1987-).

Werkgroep 18th EEUW, Holland (1967–75).

Wexner Center, Advisory Board (1986); Director's Search Committee (1988).

Williams College Museum of Art Visiting Committee member, Executive Committee (1982-).

LOCAL ORGANIZATIONS

American Red Cross, Toledo Chapter, Board of Trustees, Nominating Committee (1976); Chairman, Youth Committee.

Art Interests, Trustee (1978).

English Speaking Union, Founder, Local Chapter (1974).

Maumee Valley Country Day School, Trustee; Chairman, Long Range Planning Committee (1983-84); Vice-President and Chairman, Committee on Trustees (1987–88); Mayor's Citizen Forum (1975).

Perrysburg Mayor's Committee on Planning, City of Perrysburg (1985).

Riverside Hospital Centennial Commission (1981).

Rotary, Member; Vice Chairman, International Service Committee (1977-78); Chairman, 75th Anniversary Sculpture Committee (1987).

Toledo 1% for Art, Design Review Board (1978-).

Toledo Arts Commission, Trustee (1975-78); Associate (1979-).

Toledo Bicentennial Commission (1974–1976).

Toledo's Committee of One Hundred (1987; Cultural Arts Task Force (1987).

Toledo Community and Cultural Arts Center, Board Member (1983).

Toledo Economic Planning Council, Community and Cultural Programs Subcommittee; Chairman of the Design Committee (1981).

Toledo Executive Forum (1974–81).

Toledo Hospital, Trustee (1979); Public Relations Committee (1979-).

Toledo Mayor's Citizen's Forum (1975).

Toledo Mayor's Committee on Pedestrianization (1975).

Toledo Mayor's Committee on Renaissance Building Redevelopment (1983).

Toledo Modern Art Group (1974-).

Toledo Public Schools, "Partners in Education" Task Force Committee.

Toledo Sesguicentennial Commission (1986–7).

United Way Campaign (Toledo) Company Program, Coordinator and Speaker (1975–81).

Warren/Sherman City Venture Project: Mobility/Land Use Design Committee (1977).

Young Presidents Organization (1978-); Area Conference Resource (1985).

Trustcorp, Inc., Corporate Board; Audit and Nominating Committee (1981-).

OTHER

Originator, American-Japanese Intermuseum Interchange Program (1973–74).

Originator, numerous cultural exchange programs among U.S. institutions and museums and the Ministry of Culture of the U.S.S.R. (1987–88).

Author of numerous articles on Dutch 18th century paintings and the public and professional concerns of museums.

SOCIAL CLUBS

The Answer Club.
Carranor Hunt and Polo Club.
Catawba Island Yacht Club.
The Century Association, New York City.
Confrerie des Chevaliers du Tastevin, Sous Commanderie de Toledo.
The Toledo Club, Trustee.
Tile Club (Associate Member).

TESTIMONY

House Joint Resolution 600 to the Select Education Subcommittee of the House of Representatives in South Bend, Indiana (1978).

House of Representatives, Interior Appropriations Subcommittee (1983).

American Council on the Arts, National Conference on the Arts, The Great Lakes Regional Hearing, Chicago (1984).

EXHIBITIONS ORGANIZED

Masterpieces of Eighteenth Century Dutch Art, Minneapolis, Toledo, Philadelphia (1971).

The Original Drawings of Dr. Seuss, Toledo (1975).

Greek and Roman Silver, Toledo (1977).

Masterpieces of Dutch Silver, Toledo, Boston (1977).

El Greco of Toledo, Madrid, Washington, Toledo, Dallas (1982).

A Masterpiece from the Soviet Union: Rembrandt's Holy Family with Angels (1987).

ARTICLES

"A New Drawing by Jacques de Gheyn", MIA Museum Bulletin, 1968.

"A Lamentation by Santi di Tito", MIA Museum Bulletin, 1969.

"J.F. Millais' Peace Concluded", MIA Museum Bulletin, 1970.

Dutch Masterpieces from the Eighteenth Century, 1971–72.

"The Shepherd's Dream by Henry Fuseli", submitted to Master Drawings, 1972.

"Jacob de Wit and the Amsterdam Town Hall", Apollo, 1972.

"The Museum as Educator", submitted to Museum News, 1973; co-author with C.J. White, Dutch Drawings in the Royal Collection at Windsor Castle in preparation.

"Review of J.W. Niemeijer's Cornelis Troost", Master Drawings (Autumn, 1974, No. 3, pp. 289-91).

"A Ceiling Sketch by Jacob De Wit", Museum News, The Toledo Museum of Art, 1975.

"Jacob De Wit's Drawing of Temperance", Register, University of Kansas Museum of Art, 1977. That issue won Ilo Liston Merit Award from the Western Association of Art Museums.

Review on Adriaen Coorte, A Unique Late Seventeenth Century Dutch Still-Life Painter, by Laurens J. bol, submitted to The Burlington Magazine Publications Ltd., 1978.

"The Fine Arts and Human Values in Higher Education", published in collective edition of papers presented at conference "Higher Education's Cultural Obligations: Four Perspectives", University of Toledo, 1979.

"Dutch Silver on Display", Apollo, 1979.

Article in AAM publication Museums. Adults and the Humanities, 1981.

LECTURES

"Dutch Painting in the 18th Century" to the ASECS, Conference, 1972, University of Michigan, Ann Arbor.

"The Museum as Educator", College Art Association convention, 1973.

"Artists and Academics in the 18th Century Holland" to ASECS, Midwest Conference, 1974, Ohio State University, Columbus.

"Aesthetics and Exhortations: Lectures on Art in 18th Century Holland", seminar of ASECS, McMaster University, Hamilton, Ontario, Canada, 1977.

"Old Master Painting in Museum Collection", Findlay Associates, 1977.

"The Business of the Art Museum", BGSU, 1977; Young Presidents Organization, 1977; Findlay Rotary Club, 1977; Toledo Rotary Ladies Day Luncheon, 1978.

"The Fine Arts and Human Values in Higher Education", presented at the University of Toledo, 1979.

Panel on Museum Education, Cleveland meeting of AAM, 1979.

"The International Art Market", Toledo Chapter, Phi Beta Kappa, 1979.

OPENING REMARKS

Mr. **BROWN**. We were delighted to have almost 7.2 million visitors last year, which I hope would indicate we're doing something right. You can actually see us out your window.

Chairman **BYRD**. Right through this window. Right?

Mr. **BROWN**. That's right. That's my office. I'm reminded every day——

Senator **MCCLURE**. Is that so you can keep an eye on us? [Laughter.]

Or keep an eye on you?

Mr. **BROWN**. Keep an eye on the font from where the blessings flow.

Chairman **BYRD**. Is that whole east side your office?

Mr. **BROWN**. Yes; I have a rather extensive one. [Laughter.]

We had a very nice view of the inauguration from there, I must say. Part of the highlights of what happened last year were the exhibitions, the Gauguin show was enormously popular. It's now in Paris. People are coming from all over Europe to see it. But we had an American art, a folk art show, which was extremely well received, Italian shows, a drawing show, and currently the Cezanne show which is a great popular and critical success.

We've had a lot of emphasis on education, on teachers, and programs. I was interested to see that the use of our video cassettes, which were made for the whole country, was up 25 percent last year.

We calculate we reached 90 million people with our extension services. Acquisitions proceed apace and not a penny of Federal funds goes into our acquisitions.

We are heavily dependent on the private sector. We have a Center for Advanced Study in the Visual Arts which sponsored a wonderful symposium on The Mall in connection with the plan by Major L'Enfant and the great work of the Department of the Interior to maintain it.

FLEXIBLE FREEZE

Chairman **BYRD**. The President has proposed what he calls a flexible freeze on a number of domestic programs. Do you know if the National Gallery will come under this flexible freeze?

Mr. Brown. We haven't yet heard, Mr. Chairman, from the Office of Management and Budget. But I think it's fair to say we're already frozen. We have a ceiling on FTE's, the same number this year as last, and unlike perhaps some other Federal activities, whatever increases are in this year's budget are basic mandatory pay increases and benefits.

We are already, in order to absorb some of the burden of these, curtailing our summer evening hours, making considerable savings on utilities, charging user fees for some of the education programs, and forgoing requested Federal funding to supplement our music program.

So we feel that our belt is about as tight now as we can achieve.

Chairman Byrd. But you're not answering the question about the flexible freeze. You've said you were tightening your belt before.

Mr. Brown. That's where we simply don't have the information, Mr. Chairman.

Chairman Byrd. What would be the effect on the Gallery's fiscal year 1990 operations if your funding were frozen at the fiscal year 1989 level?

Mr. Brown. I can see severe hardships. We could perhaps study that and provide it for the record.

Chairman Byrd. Very well.

[The information follows:]

Impact of Cutting Back Funding to the Fiscal Year 1989 Level

Freezing funding at the fiscal year 1989 appropriated level would cut our fiscal year 1990 request by $3,950,000. Such a large cut would pose serious problems for the National Gallery of Art and would not be accomplished easily since 80 percent of our 1-year operating budget is used for personnel costs and rents, communications and utilities. In order to apply the proposed cut we would be required to take the following actions: Close the Gallery to the public one or more days of each week; apply a hiring freeze; freeze most new or replacement equipment purchases; reduce care and maintenance of the building to minimum standards; curtail projects of many departments with across-the-board cuts; and delay many renovation projects.

In order to meet the size of reducing the fiscal year 1990 request back to the fiscal year 1989 level, the Gallery would find it necessary to close its doors to the public at least 1 day a week. This would entail the release of approximately 33 temporary security guards. It is hoped, however, that this personnel reduction could be accomplished through attrition as a result of the normally rapid turnover rate in the guard staff.

While the step of closing 1 day a week would be taken reluctantly, we believe it is preferable to curtailing other programs or to reducing staff.

Since there really isn't any funding of a discretionary nature in the operations and maintenance function, we would have to cut back drastically on the care and maintenance of the buildings and grounds. By being closed 1 day a week we might be able to rearrange maintenance and cleaning schedules to cut back somewhat on personnel costs and reduce overtime requirements. A combination of continued energy management activity is expected to bring utilities savings in the future. We would also reduce operations and maintenance supplies and services funds which could have an adverse impact on the efficiency and useful life of the plant and equipment.

The hiring freeze would freeze positions as they become vacant. All positions that are vacant or become vacant would be reviewed by Executive Officers for priority determination before allowing them to be filled; we would require a greater lapsed time before filling positions to save funds.

As was the case with the operations and maintenance function, we would curtail many projects of the art care and general administration functions with across-the-board cuts. Basically this would consist of cut backs in travel, printing, services, and supplies for many of our departments. This would consists of such items as: cutting the summer intern program in half; reducing funds for new and replacement extension services programs and cutting back substantially on employee training.

In a similar vein we would freeze most new and replacement equipment purchases. This would result in the elimination of vital equipment for the conservation lab, photo lab, and audiovisual department. In addition, this freeze would greatly reduce the funds available for frames, books, photographs, and slides as well as equipment and/or replacement equipment required for building operations, curatorial and general administrative functions. This would also delay our ongoing effort to modernize the office equipment of departments through the purchase of personal computers.

Reduction in the Repair, Restoration and Renovation of Buildings account would result in delaying to future years substantial portions of the Renovation program at possibly increased costs. The scope of the program includes major items such as the National Sculpture Garden, replacement of the West Building skylight system, and an Energy Management System.

EXTENSION PROGRAMS

Chairman BYRD. I understand the Gallery shares a considerable amount of its art material and information with public galleries, schools, and libraries throughout the country.

I note in your budget justification that an estimated 90.8 million persons viewed your extension programs last year. How many of these were in my home State of West Virginia?

Mr. BROWN. We can provide that for the record also, Mr. Chairman. But we're happy to say that this program reaches all 50 States and we can give you a detailed breakdown.

Chairman BYRD. Very well. Would you provide the subcommittee with some examples of materials you have lent to specific institutions in West Virginia?

Mr. BROWN. We'd be happy to do that, Mr. Chairman.

[The information follows:]

EXTENSION PROGRAMS' SERVICE TO WEST VIRGINIA

In order to accommodate the varying needs of borrowers, the department of Extension Programs offers a number of distribution options. An overview and data that pertain specifically to the use of program material in the State of West Virginia is provided below:

I. Direct delivery distribution

All programs are available on a short-term loan basis, normally a five-day period. Programs are ordered, bookings confirmed, programs shipped, used, and returned to the Gallery. Programs booked on this basis are used in classrooms, auditoria, and other settings which allow for direct presentation of programs. Our audiences are composed of schools--from kindergarten through college levels, museums, libraries, civic and cultural organizations, and so on. A survey of direct loan use shows that during Fiscal Year 1988 the following organizations ordered Extension Programs:

WEST VIRGINIA SCHOOLS AND ORGANIZATIONS
SERVED BY DIRECT LOANS OF PROGRAMS
IN FISCAL 1988

NAME OF ORGANIZATION*	CITY	TYPE OF USER**
BUFFALO HIGH SCHOOL	Kenova	SEC
CALHOUN CHRISTIAN ACADEMY	Mount Zion	SEC
CENTRAL CATHOLIC HIGH SCHOOL	Wheeling	SEC
COOLFONT FOUNDATION	Berkeley Springs	COMMUN GROUP
GERRARDSTOWN ELEM. SCHOOL	Gerrardstown	ELEM
GRAFTON HIGH SCHOOL	Grafton	SEC
HACKER VALLEY ELEM. SCHOOL	Hacker Valley	ELEM
HOPEMONT STATE HOSPITAL	Hopemont	HEALTH FAC
MINERAL WELLS ELEMENTARY	Mineral Wells	ELEM
OAK HILL HIGH SCHOOL	Oak Hill	SEC
OCEANA HIGH SCHOOL	Oceana	SEC
PARKERSBURG ART CENTER	Parkersburg	ARTS ORG
POTOMAC STATE COLLEGE	Keyser	COLL/UNIV
SAINT FRANCIS HIGH SCHOOL	Morgantown	SEC
SOUTH JUNIOR HIGH SCHOOL	Morgantown	SEC
ST. ALBANS HIGH SCHOOL	St. Albans	SEC
TRINITY EPISCOPAL CHURCH	Martinsburg	COMMUN GROUP
WASHINGTON IRVING HIGH SCHOOL	Clarksburg	SEC
WESLEY UNITED METHODIST CHURCH	Morgantown	COMMUN GROUP
WEST LIBERTY STATE COLLEGE	West Liberty	COLL/UNIV
WEST VIRGINIA WESLEYAN COLLEGE	Buckhannon	COLL/UNIV
WOMAN'S CLUB OF SHINNSTON	Shinnston	COMMUN GROUP
WOOD COUNTY SCHOOLS	Parkersburg	K-12
XXXXX(INSTRUCTOR)	Martinsburg	COLL/UNIV

*Numerous orders for many programs are placed by each organization in the course of the year.
**Explanation of abbreviations on next page.

A review of direct loans by type of borrowing institution shows the following distribution in West Virginia:

DISTRIBUTION OF DIRECT LOAN BOOKINGS BY USER GROUP

TYPE OF USER:	PERCENTAGE OF BOOKINGS
ELEMENTARY SCHOOLS (ELEM)	8%
SECONDARY SCHOOLS (SEC)	44%
K-12 (SCHOOL DISTRICTS--KINDERGARTEN-12TH GRADE)	17%
COLLEGES/UNIVERSITIES (COLL/UNIV)	11%
COMMUNITY GROUPS (COMMUN GROUP)	18%
ARTS ORGANIZATIONS (ARTS ORG)	2%
	100%

II. Indirect delivery: Affiliate Loan system

A. Extended loans

All slide programs, videocassette titles, and occasionally, films are available for long term deposit in instructional media centers, school systems, educational resource centers, libraries, museums, etc. This distribution option permits ready access to program materials over an extended period of time.

B. Videocassette duplication for circulation

This is a form of distribution that is similar to and is often joined with the extended loan program. We provide video masters to affiliate organizations in order for them to make duplicate videocassettes for long term use and for direct circulation to their subsidiaries, e.g., schools in a school district. Master material is returned to the Gallery for use by other groups, but each affiliate is responsible for tracking the data regarding showings and audiences and reporting such information to us biannually.

Attachment A contains the lists of Extension Programs on loan to four West Virginia agencies with which we have made arrangements for extended loans and videocassette duplication and circulation.

Attachment B is excerpted from our Fiscal Year 1988 Affiliate Report and shows data for the affiliate agencies in West Virginia in the past year.

II. Indirect delivery: Affiliate Loan System (continued)

C. Television Presentation

Upon application, television stations may receive selected Extension Programs for public and educational television broadcast. Most of the television stations using our programs transmit not only to their specific educational system (school district, university) but also to their communities. Currently, Southern West Virginia Community College is broadcasting from two locations: Williamson and Logan, West Virginia. They report having shown Gallery programs 415 times in the past year. Lists of the titles used by both campuses are given in Attachment C.

Extension Programs also reach West Virginia viewers through ACSN (The Learning Channel), an educational/public access network that transmits our programming to all fifty states. Their six affiliate stations in West Virginia are located in Bluefield, Buckhannon, Institute, Martinsburg, Rupert, and Weston; each station received 96 feeds of all available Gallery programs in Fiscal Year 1988.

ATTACHMENT A
AFFILIATE LOAN SYSTEM
EXTENDED LOANS &
VIDEOCASSETTE DUP/CIRC

ORGANIZATION RECORD

ORGANIZATION: West Virginia Dept. of Education
Capitol Complex, B-330
Charleston, WV 25305

CONTACT: Dr. Jeanne Moore
POSITION: Coordinator Art/Music
TELEPHONE: 304-348-7805
USER CODE: K-12

CONTRACT TYPE: B CONTRACT DATE: 80/03/10 MASTER MATERIALS

CAT #	PROGRAM TITLE	SHIP DATE* Year/Month/Day	RETURN DATE* Year/Month/Day
001	700 Years of Art	80/06/04	Extended
002	Survey of American Painting	80/06/04	Extended
003	Painting in Georgian England	80/06/04	Extended
004	Paintings of Great Spanish Masters	80/06/04	Extended
005	Bkgrds of Modern Painting in France	80/06/04	Extended
006	Famous Men & Women in Portraits	80/06/04	Extended
007	Intro. to Understanding Art	80/06/04	Extended
014	American Textiles	80/06/04	Extended
015	African Art	80/06/04	Extended
041	Impressionism	80/06/04	Extended
008	The Artist's Hand	80/06/04	Extended
009	Color & Light in Painting	80/06/04	Extended
010	The Artist's Eye	80/06/04	Extended
042	The Far North	80/06/04	Extended
043	The Chinese Past	80/06/04	Extended
048	Morris Louis	80/06/04	Extended

WEST VIRGINIA DEPT. OF EDUCATION (CONT.)

		MASTER MATERIALS	
CAT #	PROGRAM TITLE	SHIP DATE*	RETURN DATE*
		Year/Month/Day	
049	Henri Matisse	80/06/04	Extended
050	Venetian Painting	80/06/04	Extended
108	On Loan From Russia	82/07/26	Extended
022	PA German Folk Art	82/08/10	Extended
023	Shaker Crafts	82/08/20	Extended
026	Pottery	82/08/10	Extended
027	Woodcarving	82/08/10	Extended
029	Textiles	82/08/10	Extended
031	Furniture	82/08/10	Extended
032	Toys	82/08/10	Extended
034	Metalwork	82/08/10	Extended
038	Dolls	82/08/10	Extended
047	Tut	81/07/30	Extended
044	European Vision of America	81/07/30	Extended
046	Thomas Jefferson: Architecture	81/07/30	Extended
138	Adventures in Art	81/08/06	82/02/01
132	Of Time, Tombs & Treasure	81/08/06	82/02/01
140	Picasso: The Saltimbanques	81/08/06	82/02/01
139	American Light: Luminist Movement	81/08/06	82/02/01
101	American Vision	81/08/06	82/02/01
102	In Search of Rembrandt	81/08/06	82/02/01
107	Leonardo: To Know How to See	81/08/06	82/02/01
136	Femme/Woman: A Tapestry by Joan Miro	81/08/06	82/02/01
137	Mobile, by Alexander Calder	81/08/06	82/02/01
141	Picasso: Circus	82/07/01	82/11/01
VC201	Edvard Munch: Symbols & Images	81/09/09	81/10/23
054	Degas: The Dancers	87/02/18	Extended
056	German Expressionist	ASAP	Extended
057	James Whistler: Etchings	ASAP	Extended

ORGANIZATION RECORD

ORGANIZATION: Cabell County Public Schools
620 20th St.
Huntington, WV 25709

CONTACT: Ms. Nancy Williamson
POSITION: Supervisor of Art
TELEPHONE: 304-526-9881
USER CODE: K-12

CONTRACT TYPE: B CONTRACT DATE: 84/10/17

		MASTER MATERIALS	
CAT #	PROGRAM TITLE	SHIP DATE*	RETURN DATE*
		Year/Month/Day	
VC012	Christmas Story in Art	84/11/01	84/11/29
VC101	American Vision	84/11/01	84/11/29
VC107	Leonardo: To Know How to See	84/11/01	85/03/01
VC131	Eye of Thomas Jefferson	84/11/01	84/11/29
VC132	Of Time, Tombs, and Treasure	84/11/01	84/11/29
VC133	National Gallery Builds	84/11/01	84/11/29
VC136	Femme/Woman: Tapestry by Joan Miro	84/11/01	84/11/29
VC137	Mobile, by Alexander Calder	84/11/01	84/11/29
VC138	Adventures in Art	84/11/01	84/11/29

CONTRACT TYPE: B   CONTRACT DATE: 84/10/17

CAT #	PROGRAM TITLE	MASTER MATERIALS SHIP DATE*	 RETURN DATE*
		Year/Month/Day	
VC139	American Light: Luminist Movement	84/11/01	84/11/29
VC140	Picasso: The Saltimbanques	84/11/01	84/11/29
VC142	The Quiet Collector: A. W. Mellon	84/11/01	84/11/29
VC143	David Smith, American Sculptor	84/11/01	84/11/29
VC144	Important Information Inside:Peto	84/10/09	84/11/08
VC145	Raphael & the American Collector	85/07/12	85/08/13

ORGANIZATION RECORD

ORGANIZATION: Clay County Library
Main Street, P.O. Box 60
Clay, WV 25043

CONTACT: Mr. Michael Ontko
POSITION: Director
TELEPHONE: 304-587-4254
USER CODE: LIBRARY

CONTRACT TYPE: B   CONTRACT DATE: 86/11/20

CAT #	PROGRAM TITLE	MASTER MATERIALS SHIP DATE*	 RETURN DATE*
		Year/Month/Day	
VHS012	Christmas Story in Art	87/03/26	87/06/05
VHS101	American Vision	87/03/26	87/06/05
VHS107	Leonardo: To Know How to See	87/03/26	87/06/05
VHS131	Eye of Thomas Jefferson	87/03/26	87/06/05
VHS132	Of Time, Tombs, and Treasure	87/03/26	87/06/05
VHS133	National Gallery Builds	87/03/26	87/06/05
VHS136	Femme/Woman: Tapestry by J. Miro	87/03/26	87/06/05
VHS137	Mobile, by Alexander Calder	87/03/26	87/06/05
VHS138	Adventures in Art	87/03/26	87/06/05
VHS139	American Light: Luminist Movement	87/03/26	87/06/05
VHS140	Picasso: The Saltimbanques	87/03/26	87/06/05
VHS142	The Quiet Collector: A. W. Mellon	87/03/26	87/06/05
VHS143	David Smith, American Sculptor	87/03/26	87/06/05
VHS144	Important Information Inside: Peto	87/03/26	87/06/05
VHS145	Raphael & the American Collector	87/03/26	87/06/05
VHS146	Audubon: The Birds of America	87/03/26	87/06/05
VHS147	Treasure Houses of Britain 1-2-3	87/02/13	87/06/22
VHS148	Winslow Homer	87/03/26	87/06/05

ORGANIZATION: Veterans Administration
Medical Center, Library Service
Martinsburg, WV 25401

CONTACT: Ms. Eileen W. Southerly
POSITION: Librarian
TELEPHONE: 304-263-0811
USER CODE: HEALTH FAC

CONTRACT TYPE: B   CONTRACT DATE: 84/11/29

CAT #	PROGRAM TITLE	MASTER MATERIALS SHIP DATE*	 RETURN DATE*
		Year/Month/Day	
VC012	Christmas Story in Art	84/12/10	84/12/30
VC101	American Vision	84/12/10	84/12/30

CAT #	PROGRAM TITLE	MASTER MATERIALS SHIP DATE*	 RETURN DATE*
		Year/Month/Day	
VC102	In Search of Rembrandt	84/12/10	84/12/30
VC107	Leonardo: To Know How to See	84/12/10	84/12/30
VC131	Eye of Thomas Jefferson	84/12/12	84/12/30
VC132	Of Time, Tombs, and Treasure	84/12/12	84/12/30
VC133	National Gallery Builds	84/12/14	84/12/30
VC136	Femme/Woman: Tapestry by J. Miro	84/12/14	84/12/30
VC137	Mobile, by Alexander Calder	84/12/14	84/12/30
VC138	Adventures in Art	84/12/18	85/01/14
VC139	American Light: Luminist Movement	84/12/18	85/01/14
VC140	Picasso: The Saltimbanques	84/12/18	85/01/14
VC142	The Quiet Collector: A. W. Mellon	84/12/18	85/01/04
VC143	David Smith, American Sculptor	84/12/21	85/01/15
VC144	Important Information Inside:Peto	84/12/21	85/01/14
VC145	Raphael and American Collector	85/05/09	85/06/28

*Dates are given in year-month-day order for sorting purposes.

ATTACHMENT B
WEST VIRGINIA
AFFILIATE LOAN USE
FISCAL YEAR 1988

ORGANIZATION	TYPE	SHOWINGS	AUDIENCE
Cabell County Public Schools	K-12	87	1,491
Clay County Library	LIB	152	3,794
Veterans' Administration	Health Fac.	10	150
West Virginia Dept. of Educ.	K-12	41	883
	TOTAL:	290	6,318

ATTACHMENT C
AFFILIATE LOAN SYSTEM
TELEVISION

ORGANIZATION RECORD

ORGANIZATION: Southern West Virginia Community College
Logan Campus
Logan, WV 25601

CONTACT: Mr. Robert Moore
POSITION: Television Coordinator
TELEPHONE: 304-792-4300
USER CODE: TV COLL/UNIV

CONTRACT TYPE: A2&B CONTRACT DATE: 85/07/02

CAT #	PROGRAM TITLE	MASTER MATERIALS SHIP DATE*	 RETURN DATE*
		Year/Month/Day	
VC012	Christmas Story in Art	85/07/02	85/07/15
VC101	American Vision	85/07/02	85/07/15
VC102	In Search of Rembrandt	85/07/02	85/07/15

		MASTER MATERIALS	
CAT #	PROGRAM TITLE	SHIP DATE*	RETURN DATE*
VC107	Leonardo: To Know How to See	85/07/02	85/07/15
VC131	Eye of Thomas Jefferson	85/07/02	85/07/15
VC132	Of Time, Tombs and Treasure	85/07/02	85/07/15
VC133	National Gallery Builds	85/07/02	85/07/15
VC136	Femme/Woman: Tapestry by J. Miro	85/07/02	85/07/15
VC135	Ancient Moderns	85/07/02	85/07/15
VC137	Mobile, by Alexander Calder	85/07/02	85/07/15
VC138	Adventures in Art	85/07/02	85/07/15
VC139	American Light: Luminist Movement	85/07/02	85/07/15
VC140	Picasso: The Saltimbanques	85/07/02	85/07/15
VC142	The Quiet Collector: A. W. Mellon	85/07/02	85/07/15
VC143	David Smith, American Sculptor	85/07/02	85/07/15
VC144	Important Information Inside:Peto	85/07/02	85/07/15
VC145	Raphael & the American Collector	85/07/02	85/07/15
129	Picasso	85/07/09	85/07/15
108	On Loan from Russia	85/07/09	85/07/15
113	A Nation of Painters	85/07/09	85/07/15
141	Picasso and the Circus	85/07/09	85/07/16
110	Goya	85/07/09	85/07/16
111	Fragonard	85/07/09	85/07/16
112	Degas	85/07/09	85/07/16
115	Copley	85/07/09	85/07/15
116	El Greco	85/07/09	85/07/15
117	Rembrandt	85/07/09	85/07/15
118	Renoir	85/07/09	85/07/15
119	Turner	85/07/09	85/07/16
120	Blake	85/07/09	85/07/16
121	Canaletto	85/07/09	85/07/16
122	Cassatt	85/07/09	85/07/15
123	Catlin	85/07/09	85/07/15
124	Cezanne	85/07/09	85/07/15
125	Durer	85/07/09	85/07/16
126	Rubens	85/07/09	85/07/16
127	Monet	85/07/09	85/07/15
128	Gauguin	85/07/09	85/07/15
130	Treasures of Tutankhamun	85/07/09	85/07/15

ORGANIZATION RECORD

ORGANIZATION: Southern WV Community College
Williamson Campus, Armory Drive
Williamson, WV 25661

CONTACT: Mr. R. Michael Baldwin
POSITION: Media Specialist TV Department
TELEPHONE: 304-235-2800
USER CODE: TV COLL/UNIV

CONTRACT TYPE: A2 CONTRACT DATE: 88/06/24

		MASTER MATERIALS	
CAT #	PROGRAM TITLE	SHIP DATE*	RETURN DATE*
		Year/Month/Day	
VC101	American Vision	88/07/22	88/09/15
VC107	Leonardo: To Know How to See	88/07/22	88/09/02
VC131	Eye of Thomas Jefferson	88/07/22	88/09/02
VC132	Of Time, Tombs, and Treasure	88/07/22	88/09/02

CONTRACT TYPE: A2 CONTRACT DATE: 88/06/24 MASTER MATERIALS

CAT #	PROGRAM TITLE	SHIP DATE*	RETURN DATE*
		Year/Month/Day	
VC133	National Gallery Builds	88/07/22	88/09/02
VC136	Femme/Woman: A Tapestry by J. Miro	88/07/22	88/09/02
VC137	Mobile, by Alexander Calder	88/07/22	88/09/02
VC138	Adventures in Art	88/07/22	88/09/02
VC139	American Light: Luminist Movement	88/07/22	88/09/02
VC140	Picasso: The Saltimbanques	88/08/12	88/09/15
VC142	The Quiet Collector: A. W. Mellon	88/08/12	88/09/15
VC143	David Smith, American Sculptor	88/08/12	88/09/15
VC144	Important Information Inside:Peto	88/08/12	88/09/15
VC145	Raphael and the American Collector	88/08/12	88/09/15
VC146	Audubon: The Birds of America	88/08/12	88/09/15
VC148	Winslow Homer	88/08/12	88/09/15
VC149	James McN. Whistler: Etchings	88/08/12	88/09/15
VC150	William Merritt Chase: Shinnecock	88/08/12	88/09/15
VC012	Christmas Story in Art	88/08/12	88/09/15

*Dates are given in year-month-day order for sorting purposes.

SUMMER EVENING HOURS

Chairman Byrd. You spoke of reductions in summer evening hours. Your opening statement indicated that your fiscal year 1990 budget proposes a reduction of $375,000 which will eliminate your summer evening operations at the Gallery.

Is that correct?

Mr. Brown. That is correct.

Chairman Byrd. When you refer to the fiscal year 1990 budget, proposing a reduction of $375,000, you are referring to a Reagan budget, aren't you?

Mr. Brown. Yes.

Chairman Byrd. I presume that OMB made that reduction for you?

Mr. Brown. Yes.

Mr. Roache. They require that we absorb three-quarters of the annualized cost of this newest pay raise. And we have to show some savings in the utilities and in the funding for the Music Program.

Chairman Byrd. Do you consider those to be your lowest priority programs?

Mr. Brown. It's hard always to juggle the priorities, but we do feel we are open in the summer from 10 to 5. Additional hours are not as heavily visited on a per-hour basis. We have about 17 percent of the visitors in the summer come in during the 4 evening hours as against the 7 day hours.

So it's perhaps 40 percent of the hours we're serving only 17 percent of the visitors. So, in terms of a hard-nosed, cost-effective analysis, those we're going to cut.

However, it is something we don't do enthusiastically because I believe there is also a question of the quality of the visit as well as the quantity of the visitors.

And if it is slightly less crowded, it makes the experience all the more meaningful for the visitor.

Chairman BYRD. What impact would the reduction on the number of hours have upon the number of visitors in your opinion?

Mr. BROWN. We would have a dip in the number of visitations. We could make that calculation for you.

Mr. HERRICK. We would estimate a dip of 17 to 20 percent. On the other hand, if people knew they couldn't come during the evening hours, they might come during the day.

Chairman BYRD. Senator McClure.

WATER AND SEWER

Senator MCCLURE. Thank you, Mr. Chairman.

In the past, the District of Columbia's Federal appropriation has covered the cost of sewer and water services for Federal buildings in the District. In fiscal year 1990, however, the D.C. government will propose legislation which will authorize them to bill Federal agencies separately.

That was proposed last year as I recall and, in fiscal year 1989, the Gallery estimated that this cost would be between $1.455 million and $3.012 million.

The fiscal year 1990 estimate is down to $397,000. How did the estimate come down so much?

Mr. BROWN. I asked the same question, Senator. And it's a fascinating answer, which is:

The assumptions on which those calculations were based were on the basis that the District would take the water out of the Potomac and send it through our air-conditioning equipment and then send it to their sewage treatment plant before returning it to the river.

And we were expecting to have to pay the District for the processing of that water. Now, it turns out that that's totally unnecessary. We're not polluting the water, we're simply sending it through our chillers.

And for the cost of putting in a pipeline, we can take that water and return it directly to the river and save an enormous amount of money. That is about to happen and we are about to break ground next week.

I understand with a pipeline that we'll be able to hook into the main storm sewer system of the city.

Senator MCCLURE. And the city will permit that?

Ms. EVANS. In fact, they are executing that.

Mr. ROACHE. We run something like 125 million cubic feet of water through the system, which is an awful lot of sewer capacity.

Senator MCCLURE. And they're anxious to do that?

Mr. ROACHE. Yes.

GALLERY'S COLLECTION

Senator MCCLURE. That is a fascinating answer. The National Gallery of Art has earned a reputation for maintaining collections of a quality that place it among the greatest of the national galleries in the world.

The collections have been, and continue to be, a symbol of private donation. Since 1985, the Gallery's collections have grown consistently in all but two categories--the number of sculptures, books, and documents, decorative art objects, and photographic images all maintained a steady increase. The number of paintings and the number of works of art on paper, however, dropped in 1987.

Is there a reason that these totals dropped?

Mr. Brown. We commend you, Senator, for your sharp eye in reading our statistics because if you took our statistics at face value, yes, they did drop. But, in fact, in the vital category of paintings, the statistics that we gave you last year, which said that we had 2,087 paintings, in fact, was a typographical error. And it should have read 2,807. Then I think we suddenly have a lot more art.

We apologize for that.

In the other category of graphics, there is a very interesting reason, which is that now, with the computerization of our collections management, we are beginning to be able to get a completely accurate inventory of every scrap of paper in our graphics collections. Before we just did it by eye and estimate. So the numbers we reported to you are accurate and do not show any diminution.

Senator McClure. It's for keeping a more accurate count, is that it?

Well, thank you very much, Mr. Chairman. I'll submit the balance of my questions for the record.

NATIONAL SCULPTURE GARDENS

Chairman Byrd. Your budget justifications indicate that you have set 1991, the 50th anniversary of the Gallery, as your target date for opening the proposed National Sculpture Garden. Earlier in the justification material is the statement that $3 million was provided for construction of the garden in fiscal year 1986. And that, quote: "Notwithstanding the Gallery's estimate of $6 to $7 million total costs, no new funds have been included in the fiscal year 1990 budget for this project."

How will you be able to complete this facility by 1991 if you don't have the funding? Will you seek private donations?

Mr. Brown. No; I think the short answer is we won't, Mr. Chairman. Since you have raised it, we did ask OMB for the necessary funds to complete this project in this last budget submission. And it was excluded at their direction. We still have another year.

I think, if they had known the kind of momentum that we were generating in the private sector in terms of the acquisition of art, they might have come out with a better understanding of our emergency here.

The Ford Motor Co. sent us a letter in which they have expressed great interest in providing $2 million earmarked for our acquisitions and the expenses of opening an exhibition at the National Sculpture Garden.

In the letter, I'll read you their phrase, they say:

> You should understand that our consideration for making this $2 million gift for the National Sculpture Garden rests upon the assumption that direct congressional appropriations would be forthcoming before any donations will be made.

In addition to that, a local foundation, the Cafritz Foundation, has talked of a gift that might total $10 million for the acquisition of sculpture but, again, are holding back from completing this until they have a better feeling for what the Federal side will do.

As you know, the whole provision that Andrew Mellon provided is based upon this sense of partnership, and Gallery costs have been matched by enormous amounts from the private sector.

But the understanding has been that the acquisition of art is something we never asked the Federal Government to help with, so we have to get that all from the private side.

But, often, that is enormously facilitated by the sense that the Federal Government also will be helping on the project.

We have been given assurances by this committee that they did believe in the project and the suspension of appropriations toward this was simply that we have been slow in acquiring the art, which is true because we've been in negotiations and hoping for collections en bloc, which have not panned out.

But, using our anniversary as a target, and with the very encouraging news from at least these two funding sources and perhaps others, we feel that the whole program has this kind of reality now. We are very eager to get the catalytic help of Federal support bringing in these private donations for the benefit of everyone, which is 23 million visitors to The Mall a year.

Chairman BYRD. What are we talking about here in Federal funding?

Mr. BROWN. In Federal funding, we would need an additional $3,766,000 to hit the target that we feel would be required to complete the structure of the garden.

Chairman BYRD. Is that amount before the funding? These at the low end?

Mr. BROWN. It's very cost effective.

Chairman BYRD. What happened to the $3 million appropriated? Is that 1966? 1986?

Mr. BROWN. Eighty-six.

Chairman BYRD. 1986.

Mr. BROWN. We have begun to use that for the design aspects of it. But we also, in consultation with the staffs on the Hill, have borrowed some of it to proceed with our emergency ongoing renovation needs on the expectation that it will be replenished eventually, because it was not in 1986 the highest priority in terms of time because we still had not located where the sculpture would come from.

In the meantime, our roofs are leaking. We have a big project of redoing our whole 5 acres of skylight over the West Building which is costing so much in repairs that it's foolish not to just do it again. And we have other maintenance problems and opportunities in terms of managing them, and so forth.

So we have considered the renovation and remodeling budget as a whole.

SECURITY GUARD SPECIAL PAY RATES

Chairman Byrd. Like the Smithsonian, you are requesting increased funding for special pay rates for your security guards. The budget shows an increase of $806,000 for that purpose.

Has the Office of Personnel Management completed action on your request?

Mr. Brown. It has not yet. It's still pending and we're still very eager to hear because just as at the Smithsonian, it's an enormously high priority.

Indeed, to make a comparison, we feel it's an even higher priority for us because our works of art are out there where they're much more vulnerable than many of the Smithsonian exhibits in glass cases; some of theirs are also somewhat replaceable.

Works of art, as you may agree, Mr. Chairman, are valued at astronomical sums. To be able to command in the labor market the kind of guard who can take on the responsibility of guarding the national heritage with enough seriousness that we can sleep well at night is a very difficult problem.

Chairman Byrd. If OPM approves a lesser rate than you have requested, let the subcommittee know the amount of downward adjustment we should make in your budget.

Mr. Brown. We'd be happy to do that, Mr. Chairman.

Senator McClure. Mr. Chairman, I have a question on that.

Could you provide for the record the number of guards that you have, the length of service by categories—not necessarily everyone, but lumping them together how long they have served—and the numbers of persons you have on medical disability retirement?

Mr. Brown. We'd be very happy to do that, Mr. Chairman.

[The information follows:]

NUMBER OF GUARDS AND AVERAGE LENGTH OF SERVICE BY GRADE AS OF FEBRUARY 25, 1989

Grade	Total number	Average length of service in years
Full-time permanent (FTP):		
GS-3	3	1.4
GS-4	121	6.3
GS-5	61	10.2
GS-6		
GS-7	22	14.3
GS-8	8	28.2
GS-9		
GS-10	1	27.3
GS-11	1	22.6
Subtotal FTP	217	9.2
Temporary (Temp.):		
GS-3	12	.4
GS-4	48	1.3
Subtotal temp	60	1.1
Total all guards	277	7.4

Security Guard Medical Disability Retirement

From June, 1983 to present, seven disability retirements of guards have been approved at the National Gallery of Art. The last guard disabiilty retirement was August, 1987.

Based on our inquiry OPM informed us that, between July of 1987 and July 1988, 29 guards retired on medical disability government wide of which one was from the Gallery.

SECURITY GUARD TURNOVER

Mr. Brown. Like the Smithsonian, part of our problem, Mr. Chairman, is that it's hard enough finding them to come aboard at all. They come in, they turn over, they retire, or they leave.

And all that expense and training them and then you can't get them to stay. To my great chagrin, at one point, almost one-half the galleries had to be closed. That's a result of guards calling in sick and turnover problems, which we had to solve with heavy Thanksgiving visitation.

Getting that salary standard up is a high priority.

Senator McClure. I assume they are equivalent grade levels with that of the Smithsonian.

Mr. Brown. They are now.

Ms. Evans. That is, over the past year we have been making adjustments to increase our number of grade 5's, which will soon put us essentially parallel with the Smithsonian.

Senator McClure. I don't expect too much from an employee who is paid a little over $12.000. But, as a matter of fact, I don't have anyone like that Jeff was telling me. I had hired him about 3 years ago. [Laughter.]

NEW DEPUTY DIRECTOR

Mr. Brown. Speaking of recruiting, Mr. Chairman, if I might, I neglected to mention in the beginning that since the last time we were here, we have secured the services of a deputy director of great distinction. I have a biographical sketch here, which I would submit for the record.

He is with us here, Roger Mandle. He is the distinguished former director of the Toledo Museum of Art, and we're pleased to have him on board.

Chairman Byrd. The biographical sketch has been included in the record.

Do you have any further questions?

Senator McClure. No further questions.

Chairman Byrd. Mr. Brown, thank you, and those who accompanied you today, for your testimony.

ADDITIONAL COMMITTEE QUESTIONS

There will be additional questions submitted for the record and I would appreciate a prompt response.

Thank you very much.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

ASBESTOS REMOVAL

Question: The budget justification, on page 5-10, indicates that a survey to identify all asbestos remaining in your buildings will be completed by mid FY 89. Is the survey finished?

Answer: The survey is not yet complete. The final report on the results of the Gallery's asbestos survey is expected later this spring.

Question: What is the scope of the asbestos problem in the Gallery's buildings? Does it pose a hazard to both visitors and employees?

Answer: Asbestos was used extensively in the construction of the West Building in the late 1930's as an insulator and for fireproofing. It was used on pipe and duct insulation, in some ceilings, floor tiles, and baseboards, and in fireproofing of high-voltage areas. It was used in the machine and steam rooms and pipe tunnels for both fireproofing and insulation, and in the older greenhouses.

The East Building and the connecting link between the two buildings were constructed in the 1970's during the phase-out of asbestos materials in building construction. Nevertheless, the East Building and connecting link are being included in the current asbestos survey.

We believe that we have not exposed any of our visitors to an asbestos hazard, since asbestos abatement was successfully performed in areas that would have endangered the public.

Some employees were exposed to asbestos in the period prior to the mid 1980's before awareness of the problem had heightened, and before asbestos regulations were formulated and guidelines for abatement and removal were fully developed. Since than the Gallery has provided training for a certified asbestos coordinator who is recertified annually, and has trained two employees for small, in-house asbestos abatement jobs sometimes required before repairs to the building or its equipment can be done. Any hazards encountered today are quickly removed either through removal or encapsulation. The Gallery complies completely with the EPA, NIOSH, and ADHERA regulations in all its dealings with asbestos.

Question: How much have you spent, to date, on asbestos removal? Do you have an estimate of the remaining cost to eliminate the problem?

Answer: Asbestos abatement costs (including both removal and encapsulation methods) totaled approximately $1,050,000 between the beginning of FY 1982 and FY 1989 to date. Additional minor asbestos abatement work has been conducted by the Gallery's own specially-trained staff and by contractors in the process of other renovation work, but these costs have not been tracked since no separate contracts were issued.

Since the asbestos survey is not yet complete, we are not yet able to reasonably estimate the costs of addressing any remaining asbestos problems.

REPAIR, RESTORATION AND RENOVATION OF BUILDINGS

Question: As stated earlier, your budget request includes $2,305,000 for repair, restoration and renovation of buildings, an increase of $1,555,000 over FY 1989. Would you describe some of the projects which would be funded in FY 1990 under this request and provide for the record a listing, in priority order, of the projects which would be funded within the $2,305,000 request, including a dollar amount for each project.

Answer: The Gallery's Repair, Restoration and Renovation account is divided into two portions: I. Renovation and II. National Sculpture Garden. The items covered in section I are further broken down into five categories (A through E) to reflect how the funds are to be used.

Descriptions of the projects in category A, "remodeling" are shown on page 5-13 of the FY 1990 budget submission. Category B, "environmental work," includes ventilation improvements in the paint and carpentry shop areas that need to be made for safety reasons, and installation of safety railings in several locations. Category C, "general repairs," includes a wide variety of projects, the largest of which are for rebuilding and repair of the Gallery's more than 30 elevators. Category D, "energy management," includes the continuation of the Gallery's plan for installation of variable speed drives, plus some upgrading of the East Building power and the West Building electrical service panels. Category E, "lighting," includes changes in exterior lighting for safety reasons and in interior lighting for energy saving reasons.

The description of section II., National Sculpture Garden, appears on pages 5-13 through 5-15 of the FY 90 submission.

With the projected carryover of no-year renovations funds from FY 89 into FY 90, and assuming the additional $2,305,000 requested is approved, the Gallery will have $3,609,000 in funds for renovation purposes. The Gallery's priorities for the expenditures of those funds would be as follows.

Priority	Project	Estimated Cost FY 90
1.	Environmental Work: Ventilation Improvements	$100,000
2.	General Repairs: Elevator Rebuilding	250,000
3.	Remodeling: Connecting Link and Related Areas	230,000
4.	National Sculpture Garden	2,131,000
5.	Remodeling: Information Room	30,000
6.	Energy Management: Variable Speed Drives	300,000
7.	Lighting - Exterior Safety	18,000
8.	Remodeling: X-Ray Facility for Conservation	25,000
9.	General Repairs: Replace East Building 8th Level Chill Water Return	18,000
10.	Environmental: Safety Railings	50,000
11.	Remodeling: Other Office Modifications	75,000
12.	Remodeling: East Building Art Entrance	40,000

Priority	Project	Estimated Cost FY 90
13.	Energy Management: Upgrade East Building Power	40,000
14.	Energy Management: Replace West Building Service Panels	60,000
15.	General Repairs: Repair Service Corridor Doors	30,000
16.	General Repairs: Repair Metal Panels in Elevators	20,000
17.	Lighting: Interior Energy-Saving	10,000
18.	General Repairs: New Link for Sewage Ejectors	30,000
19.	General Repairs: Replace Booster Pumps for City Water	50,000
20.	General Repairs: Replaster Areas Under Repaired Skylights	25,000
21.	General Repairs: Replace Sewage Ejectors	30,000
22.	General Repairs: Strip Excessive Paint Build-up off Gallery Walls	20,000
23.	General Repairs: Repair Wood Panels in West Building Elevators	20,000
24.	General Repairs: Contingency for Unforeseen Repairs	7,000
	TOTAL	$3,609,000

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

SUMMER HOURS

Question: In order to absorb part of the $1,024,000 incurred as a result of the January pay increase, the Gallery is proposing to eliminate summer evening hours and save $375,000 (page 1-20). In addition, the Gallery is showing estimated savings in its steam and electricity ($156,000), the costs of FERS ($66,000) and in the elimination of full federal funding for the music program ($220,000). What other options were analyzed besides the elimination of summer evening hours?

Answer: There aren't many other viable options because most of the Gallery's funding is for people and uncontrollable costs such as utilities, building and security maintenance (service, supplies and equipment replacement), and EDP costs of financial and art collections recordkeeping. We did consider a hiring freeze, reducing care and maintenance of the building, and curtailing operations of many departments with across-the-board cuts; however, elimination of summer evening hours was determined to be the least disruptive in terms of service to the public.

MUSIC PROGRAM

Question: As part of the reduction to absorb the pay raise, the Gallery has dropped their request to fund the Sunday evening concerts in the East Garden Court (page 1-16). In FY 1989, and in previous years, the concerts were funded with trust funds. Will trust funds be used in FY 1990 for this program?

Answer: Yes. Trust funds will continue to be used in FY 1990 for this program.

Question: Why do you want to fund this program through appropriated dollars?

Answer: Partial federal support for the music department is already in effect: the salary for the Assistant to the Director of Music has been federally funded since 1972 and necessary recent office renovation was accomplished with congressionally-approved funds.

To date this program has been funded largely out of income from two of the Gallery's endowments given primarily for acquisitions of works of art or other purposes not met by Federal appropriations. In part because these privately given funds are needed for other purposes and in part because we firmly believe the music program to be an integral part of the Gallery's on going public services, we consider it appropriate for this function to be fully supported by federal appropriations.

Question: What would be done with the $220,000 in trust funds which would become available?

Answer: The $220,000 in trust funds that become available would be allocated to purposes designated by the trustees of the Gallery, but in all probability to acquisitions of works of art. In the present climate of rapidly escalating art prices and reduced federal tax incentives for donations, particularly of works of art as appreciated property, American museums are increasingly hard-pressed to stem the flow of art out of the country. As we do not use federal funds for this purpose, the release of these funds would be of great help.

ENERGY USAGE

Question: The FY 1989 justification indicated that the Gallery was in the process of putting together an energy management plan which could provide for energy savings in FY 1990. The bulk of the savings would come from the installation of variable speed drives.

I note that the budget indicates that savings from electricity will total $156,000 in FY 1990. Compare the variable speed drives to the old fixed speed drives.

Answer: The speed drives control the motors that run the air conditioning fans. The fixed speed drives run at a constant high speed all the time. In contrast the variable speed drives (VSD's) allow us to vary the speed of motors, thereby lowering the energy requirement in milder weather conditions. In addition we now slow down the speed of the VSD's at night when the buildings are not open and air conditioning requirements are reduced.

Question: What is the status of the energy management plan?

Answer: The Energy Management System (EMS) portion of the energy management plan is estimated to cost $1,500,000 over a three-year period. We currently have completed about 30% the engineering design of the Energy Management System. By the end of FY 1989 we will have installed and made operational 51 VSD's.

In addition, the Gallery's energy management plans include other improvements designed to reduce utilities costs and improve efficiency. These projects are:

	1991	1992	1993
1. Complete purchase and installation of variable speed drives	$160,000	$170,000	$ -
2. Install new electrical service panels in areas with insufficient electrical capacity to ensure safety and increase ease of access to power	30,000	30,000	60,000
3. Redirect hot condensate through hot water heaters to reduce water heating costs instead of returning it to GSA	-	-	50,000
4. Upgrade building control devices	-	-	45,000
5. Create means of making ice during off-peak hours to allow cooling during the day at lower cost	-	-	25,000
6. Adapt emergency generator to allow the Gallery to generate some of its own electric power at peak times	-	-	20,000
7. Add ductwork and fans to channel excess heat from steam room to compressor room to offset costs of heating the compressor room	10,000	-	-
TOTAL	$200,000	$200,000	$200,000

Question: Does the $156,000 reduction relate to the plan?

Answer: The $156,000 relates to the VSD portion of the energy management plan. Since we will have 51 VSD's operational by the end of FY 1989, we will realize steam and electric savings.

Question: How do these savings relate to the $1.5 million energy management system mentioned on page 5-11?

Answer: The $156,000 savings is a result of the VSD installation and not the planned purchase of a computerized Energy Management System (EMS). However, the VSD's will be linked to the 'EMS' to automatically control the varying of the speed instead of manually adjusting each one as we do now.

WEST BUILDING

Question: The FY 1990 justification indicates that you are planning on speeding up the replacement of the West Building roof and skylight system. Over five years, replacement of the skylights will cost $2,500,000. What was the old funding plan and why are you proposing to alter it?

Answer: The old funding plan consisted of trying to repair the skylights as needed. However, an increase in the number and severity of the leaks requires that the skylights be replaced. We are at the point at which the cost of repair and the cost of replacement are almost the same. It is at this point we think it is a better investment to replace it because that will provide us with a longer lasting remedy.

Question: What is the problem with the skylight system?

Answer: The basic problem is the age (50 years old) of the metal framework and the deterioration of the glazing of the skylights.

NATIONAL SCULPTURE GARDEN AND GALLERIES

Question: In the FY 89 justification, you indicated that in FY 90 an additional $3.0 million would be necessary for the design and construction of the Sculpture Garden. The FY 90 Repair, Restoration and Renovation account states that no new funds have been included in the FY 90 budget for this project (pages 5-7 and 5-11). Compare your FY 89 effort to the proposed FY 90 effort for the Sculpture Garden.

Answer: At the time the FY 89 submission was prepared, the Gallery expected to begin the detailed design work for the Garden in FY 88 and obligate a major portion of construction funds in FY 88 and FY 89. At that time we had hopes that a major collector would donate a substantial number of important works of art that would provide the opening collection for the Sculpture Garden. In FY 88 and in the first quarter of FY 89 the Gallery delayed moving forward on the project in hopes that a major gift would be forthcoming. Since then, as described in the FY 90 submission on pages 5-13 through 5-15, the Gallery has decided that the chances one major donor will give a substantial collection of sculpture are too slim to justify delaying this project further. Instead, the Gallery is now pursuing multiple donors of both funds and sculpture with a view toward creating a National Sculpture Garden that may be flexible enough to allow for special exhibitions of sculpture. Some $12,000,000 in initial private donations for sculpture acquisitions seem quite realizable on the understanding that the infrastructure costs will continue to be met by the Government. We now plan to begin detailed design work by the last quarter of FY 89 and to obligate major construction funds in FY 90. The catalyst for encouraging these new donations of and for sculpture is the 50th Anniversary of the Gallery in 1991.

Question: What are the additional operational expenses of the Garden? Please provide operational expenses by year if the project proceeds as planned in FY 89 and as proposed in FY 90?

Answer: Since construction of the Garden will not be completed until FY 91 we do not expect to incur incremental operating costs in either FY 89 or FY 90. When the Garden opens in FY 91 we expect to begin incurring some incremental costs for lighting (utilities), security equipment and personnel, grounds maintenance and cleaning, installation of sculpture, transportation and relocation of art, educational labeling and tours, and periodic conservation. Estimated costs by category (in FY 89 dollars) are shown below. These figures are very preliminary and many of these costs, especially installation, transportation, and grounds maintenance costs, will vary depending on the number of relocations of sculpture required in a given year.

Preliminary Estimate Of Annual Operation Costs ($FY 89)

Utilities/Lighting	$ 25,000
Security (5 guards $20,000 per year)	100,000
Transportation and relocation of art:	
Movement of 5 large pieces per year @ $15,000 each roundtrip; movement of 12 small pieces per year @ $5,000 each roundtrip.	135,000
Installation (5 large pieces @ $3,000; 12 small pieces @ $1,500).	33,000
Grounds Maintenance (one incremental gardener @$18,000 per year)	18,000
Conservation (2 large pieces @ $10,000; 8 large pieces @ $6,000; 35 small pieces @ 600)	89,000
TOTAL	$400,000

Question: What happened to the previously appropriated funds for the Sculpture Garden?

Answer: Through fiscal year 1988, $109,000 of the $3,000,000 we originally designated for the Sculpture Garden had been obligated. On page 5-8 of our budget submission under the heading of Obligations (Actual/Est.), in category II National Sculpture Garden, we show an estimated $760,000 in the 1989 column and an estimated $2,131,000 in the 1990 column.

The $1,730,000 that we expect to spend in Category I Renovation in the 1989 period essentially takes some of the funding that we have designated in reserve for the National Sculpture Garden and uses it toward other renovation needs. If renovation funds are not replenished as we are requesting in 1990, we will have used up some of the money that would have gone to the Sculpture Garden. The rationale for this is that we don't anticipate the completion of the Sculpture Garden design phase until the end of FY 1989, and therefore, won't start the actual construction until FY 1990. At the same time we have many renovation requirements that are beginning in 1989. Some of these were delayed from FY 1988 due to staffing shortages.

CARE AND UTILIZATION OF ART COLLECTION

Question: You have requested an additional $50,000 in FY 1990 for new teacher training programs for the Education Department (page 4-4). Can you elaborate on the specifics of this new program?

Answer: Before 1988, the department only offered teacher training programs on an occasional, ad hoc basis (for example, a workshop on The Treasure Houses of Britain exhibition).

In 1988, the department of Education decided to make a major effort to increase Teacher and School Programs. To this end five Saturday teacher workshops are being offered on a trial basis during FY 1989. We have also offered in-service programs to school districts. The response has been very good; over 500 teachers have attended workshops and in-service programs, demonstrating the need for these programs. Responses to a survey sent to area schools also demonstrates great need for classroom resources for educators.

There are no funds for this program. Direct costs for the workshops are being covered by a modest charge of $10.00 per teacher per workshop and the programs are being taught by existing staff. If additional program staff were available, more teachers would be served by this program.

During the summer of 1989, we will offer a pilot teacher institute (one week-long, offered three times) on American art for which each teacher will receive continuing education credit. Again, there is no federal funding; we anticipate that direct costs will be covered by fees of $120 per participant for a week-long institute.

The $50,000 is not the total cost of the new programs, but only the cost of adding research and evaluation of continuing the pilot programs. The total costs of the desired ten workshops and two summer institutes would be $115,000.

The $50,000 would not expand the current pilot program, but would instead enable the Gallery to continue the pilots, adding research, curriculum materials development, and evaluation as follows:

Teachers' Advisory Panel	$10,000
Research/evaluation (contract)	15,000
Curriculum materials-development and testing (contract)	25,000
	$50,000

NATIONAL LENDING SERVICE

Question: In FY 1989 the Gallery requested an additional $53,000 for the National Lending Service. This service was established to make the collections of the Gallery accessible to museums throughout the United States. The FY 90 budget, however, proposes a $9,000 reduction for this program (page 4-5). Does this proposed reduction indicate a scaling back of the lending program?

Answer: No. This proposed reduction indicates the temporary development of fewer new lending exhibits in FY 1990 compared to FY 1989.

SPECIAL EXHIBITS

Question: Comparing the number of anticipated Special Exhibits for FY 1989 in the FY 1989 budget as opposed to the FY 1990 budget, I note that several exhibits have been deleted or moved to different dates. Are these problems normal or were there funding problems which made you scale back on the overall number of exhibits?

Answer: These problems are normal and arise because of changing schedules of borrowing and lending museums, the availability of works of art, and determination of appropriate galleries for the installation of each exhibition.

Question: Can you elaborate on the increased level of effort for the 10th Anniversary of the East Building from $506,000 to $850,000?

Answer: The original intention of the Tenth Anniversary exhibition was to borrow only a handful of loans to supplement the National Gallery's permanent collections. But some fortunate opportunities for potential acquisition of works of art arose, and, in the end, about 100 important paintings were borrowed for the event. We eventually hope to acquire by gift many of the borrowed works. The increased size of the 10th Anniversary Exhibition led to added costs of construction and installation of the two-year exhibition.

SUBCOMMITTEE RECESS

Chairman **Byrd**. The subcommittee stands in recess until Monday, March 6, 1989, at which time we will receive testimony from the Department of Energy on the strategic petroleum reserves and the naval petroleum reserves.

[Whereupon, at 1:05 p.m., Monday, February 27, the subcommittee was recessed, to reconvene at 10 a.m., Monday, March 6.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

MONDAY, MARCH 6, 1989

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room S-128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senator Byrd.

DEPARTMENT OF ENERGY

STRATEGIC PETROLEUM RESERVE

NAVAL PETROLEUM AND OIL SHALE RESERVES

STATEMENT OF J. ALLEN WAMPLER, ASSISTANT SECRETARY FOR FOSSIL ENERGY

ACCOMPANIED BY:

- **RICHARD D. FURIGA, DEPUTY ASSISTANT SECRETARY FOR PETROLEUM RESERVES**
- **JOHN W. BARTHOLOMEW, DIRECTOR OF STRATEGIC PETROLEUM RESERVE**
- **CAPT. ROBERT A. TAYLOR, DIRECTOR OF NAVAL PETROLEUM AND OIL SHALE RESERVES**

BUDGET REQUEST

Chairman BYRD. The subcommittee will come to order.

This is the time scheduled for the Department of the Interior and Related Agencies Appropriations Subcommittee to hear testimony on the fiscal year 1990 budget request for the strategic petroleum reserve [SPR] and the naval petroleum and oil shale reserves [NPR].

Testifying in support of both budget requests will be Mr. J. Allen Wampler, Assistant Secretary of Energy for Fossil Fuels. The subcommittee will consider the strategic petroleum reserve first.

The fiscal year 1990 budget request for the SPR totals $321,961,000, and 147 full-time-equivalent positions. Of this funding request, $194,999,000 is for construction of new oil storage facilities and for security and distribution enhancements for the entire system. This construction request is up $21.6 million or 12.5 percent above the current appropriation.

The total request for petroleum acquisition for fiscal year 1990 is $126,962,000, approximately one-half the appropriated level of $242 million for fiscal year 1989.

I note for the record that the Congress has already provided $91,555,000 for the fiscal year 1990 petroleum acquisition request by advance appropriation in the fiscal year 1989 Department of the Interior and Related Agencies appropriation bill, Public Law 100-446. Thus, the amount remaining to be appropriated for fiscal year 1990 is $35,407,000.

In addition to direct funding of $126,962,000, which is projected to support an average daily fill rate of 22,000 barrels of oil per day, the administration plans a daily 50,000 barrel supplemental delivery to the SPR as part of the proposed sale of the Elk Hills Naval Petroleum Reserves, California and Teapot Dome, Wyoming.

We will discuss these proposals in a few minutes.

Welcome to you, Mr. Wampler. We would like for you to introduce your associates and proceed with your statement. It will be included in its entirety and you may highlight it if you wish.

INTRODUCTION OF ASSOCIATES

Mr. WAMPLER. Thank you very much, Mr. Chairman.

I have with me at the table to your left and my right, Mr. Richard Furiga, who is the Deputy Assistant Secretary for Petroleum Reserves; to my far left, Capt. Robert Taylor, who is Director of our Naval Petroleum and Oil Shale Reserves Office; and to my immediate left, John Bartholomew, the Director of the Strategic Petroleum Reserve Office.

I would like to take just a very brief time to make some opening comments, Mr. Chairman.

Chairman BYRD. Very well.

OPENING STATEMENT

Mr. WAMPLER. The budget that we are presenting to you today contains three components, but all three share a common linkage.

One is the proposed sale of the Federal Government's portion of the Elk Hills and Teapot Dome oil fields. The second is the continued development and fill of the Nation's strategic petroleum reserve. The third is the funding needed to keep the naval petroleum reserves operating until a sale is consummated, or in the event we do not receive congressional approval for a sale.

As I said, Mr. Chairman, the three are linked. Selling our interest in the naval petroleum reserves would not only return a large cash payment to the Government, but under the Department's revised sales approach, it would contribute directly to the completion of a 750-million barrel strategic reserve. It would also permit the creation of a defense petroleum inventory to be available to the Department of Defense.

The strategic petroleum reserve is an energy achievement in which you and your committee members, along with the administration, can take a great degree of pride. It is by far the largest stockpile of emergency crude oil anywhere in the world, now exceeding 560 million barrels. It provides us an insurance policy against foreign supply disruptions and the threat of supply disruptions that is both formidable and effective.

The administration has joined with the great majority of Congress in advocating a continued fill of the reserve and, if possible, an acceleration of the fill. With oil imports growing, it is imperative that the size of our oil insurance policy keep pace.

Yet, as you are aware, acquiring oil for the strategic petroleum reserve is an expensive proposition. Of the more than $19 billion invested to date in the reserve, $16 billion is the amount paid for oil. Completing the 750-million barrel reserve, assuming current price trends, will require at least another $3 billion in oil purchases at a time when our budget deficit problems are the most severe.

The administration's proposal to sell the naval petroleum reserves would in essence trade a strategically less important asset for one that is of the highest national priority. The buyer or buyers of the naval petroleum reserves would be required to provide an upfront cash payment of $1 billion or more, and that could have a direct benefit toward meeting our 1990 deficit reduction goals.

They would also be required to furnish 50,000 barrels per day of specification-grade crude oil to the strategic petroleum reserve over the next 6 years. That, combined with proposed Government purchases of 22,000 barrels per day in fiscal year 1990 and 25,000 barrels per day thereafter until fiscal year 1995 would give the Nation a full strategic petroleum reserve. It would also give the Department of Defense a 10-million barrel inventory of emergency crude oil.

In terms of our ability to supply both the civilian and military sectors——

DEFENSE PETROLEUM INVENTORY

Chairman **Byrd**. Excuse me, what was that last statement?

Mr. **Wampler**. It would also give the Department of Defense a 10-million barrel inventory of emergency crude oil.

Chairman **Byrd**. 10 million barrels?

Mr. **Wampler**. Yes.

Chairman **Byrd**. Is that in the DPI?

Mr. **Wampler**. That's the defense petroleum inventory, yes, sir.

Chairman **Byrd**. 10 million barrels?

Mr. **Wampler**. Yes, sir.

Chairman **Byrd**. That's less than 40 hours of supply, isn't it?

Mr. **Wampler**. About that, yes, sir.

Chairman **Byrd**. I'm just calculating on the basis of the 6.3 million barrels that we import daily. So we've got 10 million barrels. That would be a little over 1½ days imported supply.

Thank you.

Mr. **Wampler**. In terms of our ability to supply both the civilian and military sectors of the economy with emergency crude oil in times of an energy emergency, such an asset makes a great deal of strategic sense. But, it also makes sense from a budgetary standpoint and as a way of removing the Government as a direct competitor to private enterprise in the west coast oil market.

The budget request for the strategic petroleum reserve is tied directly to the expected receipt of 50,000 barrels per day from a naval petroleum reserve purchaser. Our request for oil acquisition funds totals $127 million of which almost $92 million was advance appropriated last year. That funding level will permit us to purchase 22,000 barrels of crude oil daily for a combined fill rate of 72,000 barrels per day.

We are also requesting $182 million for storage facilities and operations. Surface construction is coming to a close. It will be completed by the end of this fiscal year. Solution mining of storage capacity is proceeding on schedule, and we will have a full 750 million barrels of capacity by the end of fiscal year 1991.

Our current fill rate is averaging around 67,000 barrels per day, somewhat lower than we had expected earlier this year when oil prices were lower. At that rate, our year-end inventory will be approximately 580 million barrels, still equivalent to the 90- to 100-day supply cushion that serves as a benchmark for the strategic petroleum reserve.

In short, Mr. Chairman, we have been very pleased with the progress made in the strategic petroleum reserve program. We remain committed to its completion and believe that the goal of a 750-million-barrel inventory level can be achieved most expeditiously by proceeding with a sale of the naval petroleum reserves.

Finally, Mr. Chairman, we have requested sufficient funds to maintain an effective management and field operations program at the naval petroleum reserves pending approval of the sale. Our budget request for the naval petroleum and oil shale reserves is $192 million. Any amounts appropriated but not required as a result of the sale would be proposed for rescission.

PREPARED STATEMENT

That, Mr. Chairman, completes my opening statement, and we will be pleased to answer any of your questions.

[The statement follows:]

STATEMENT OF J. ALLEN WAMPLER

It is my pleasure to appear before you today in support of the President's budget proposals for the Petroleum Reserves, which include the Strategic Petroleum Reserve and the Naval Petroleum and Oil Shale Reserves. I am accompanied by Mr. Richard D. Furiga, Deputy Assistant Secretary for Petroleum Reserves.

Our budget strategy for fiscal year 1990 involves both the budget requests for the Strategic Petroleum Reserve and the Naval Petroleum and Oil Shale Reserves and a proposal to sell the government's interest in Naval Petroleum Reserves Numbered 1 (Elk Hills) and 3 (Teapot Dome) with the formal transfer of title expected at the end of fiscal year 1990.

Sale of Naval Petroleum Reserves (Elk Hills And Teapot Dome)

President Bush, in his budget transmittal to Congress on February 9, 1989, reemphasized the Administration's commitment to "*restoring a balance between public and private activities that can best be performed by private enterprise...*" Previously, President Bush had stated that:

> "*The American solution for the '90s means renewing our emphasis on a limited Federal Government. It means eliminating governmental functions that overlap with each other or compete with the private sector.*"

As the Administration's revised budget proposal stated, divesting of the Federal Government's interest in the two commercial oil fields will "*accelerate the filling of the Strategic Petroleum Reserve at lower cost, increasing energy security and strengthening national security.*" The proposed legislation to sell our interest in NPR-1 and 3 is part of an integrated plan for trimming the size of government, combatting the budget deficit, filling the Strategic Petroleum Reserve more expeditiously, and enhancing the emergency energy reserves of the Department of Defense. The key provisions of this proposal are:

(1) The Secretary of Energy would be authorized to sell Teapot Dome and the Government's interest in Elk Hills.

(2) The sale would be made subject to an upfront cash payment by the buyer(s) of $1 billion or more.

(3) The buyer(s) would be committed to delivering specification oil to the Strategic Petroleum Reserve at an average rate of 50,000 barrels a day during fiscal years 1990 through fiscal year 1995, for a total of 109.5 million barrels.

(4) The buyer(s) would also be committed to providing 10 million barrels of oil for a Defense Petroleum Inventory during fiscal years 1991 and 1992. This inventory would be collocated with the Strategic Petroleum Reserve and managed by the Petroleum Reserves' Offices; it would be available at the request of the Secretary of Defense but managed by the Secretary of Energy to avoid any disruption of Strategic Petroleum Reserve drawdown.

In our view, this approach will provide a realistic way to help meet deficit reduction targets and at the same time improve our civilian and defense energy emergency preparedness.

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From a strategic perspective, the Strategic Petroleum Reserve now holds over 560 million barrels of crude oil. In addition to being located with access to refineries that depend on imported crude oil, the Strategic Petroleum Reserve is designed for rapid drawdown in an emergency. At the present time the Strategic Petroleum Reserve inventory can be drawn down and distributed at an initial rate of more than 3 million barrels a day, which provides a significant emergency response capability. Our approach would extend the benefits of a rapid-drawdown crude oil capability to the Department of Defense through the establishment of a Defense Petroleum Inventory.

Divestiture of the Naval Petroleum Reserves would also be a step in removing the Government from competition with the private sector and achieving the Administration's goal of selling assets if uniquely public purposes are not served by keeping them in the public domain. In the case of Elk Hills and Teapot Dome, we believe that the public interest would be better served if operation of the fields were conducted with business and private sector style financing and management arrangements, likely to result in more effective and efficient production and marketing of oil and gas from the Naval Petroleum Reserves than under current government procedures. In our opinion, the private sector is better equipped than the Government to respond to market changes and new technology developments.

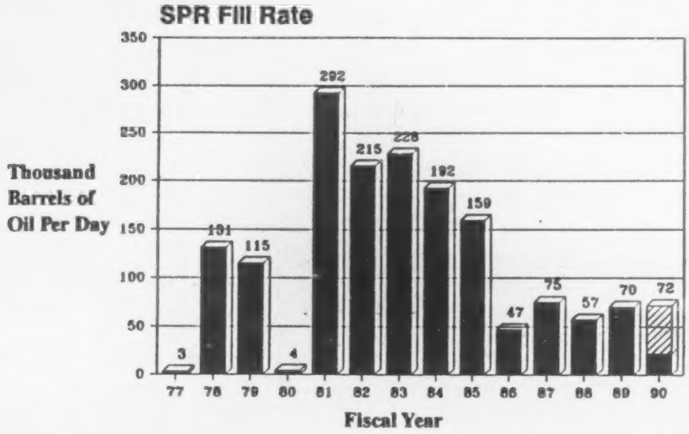
In summary, our approach would provide the following benefits:

- It would contribute materially to the reduction of the Federal deficit in fiscal year 1990.
- It would provide a Strategic Petroleum Reserve fill rate, furnished by the Naval Petroleum Reserves' buyer(s), of 50,000 barrels a day over the next six years, which, when combined with fill from appropriated funds, will more expeditiously attain our nation's current goal of a 750 million barrel strategic oil supply.
- It would enhance defense emergency preparedness by providing the Department of Defense with ready access to 10 million barrels of crude oil in an emergency.
- It would take the Government out of the business of operating oil fields in competition with the private sector and place ownership of those fields in the hands of companies with the financial incentive and the ability to improve their operation and management.

I will now turn to the budget requests for the two Petroleum Reserves programs.

Fiscal Year 1990 Budget Request - Strategic Petroleum Reserve

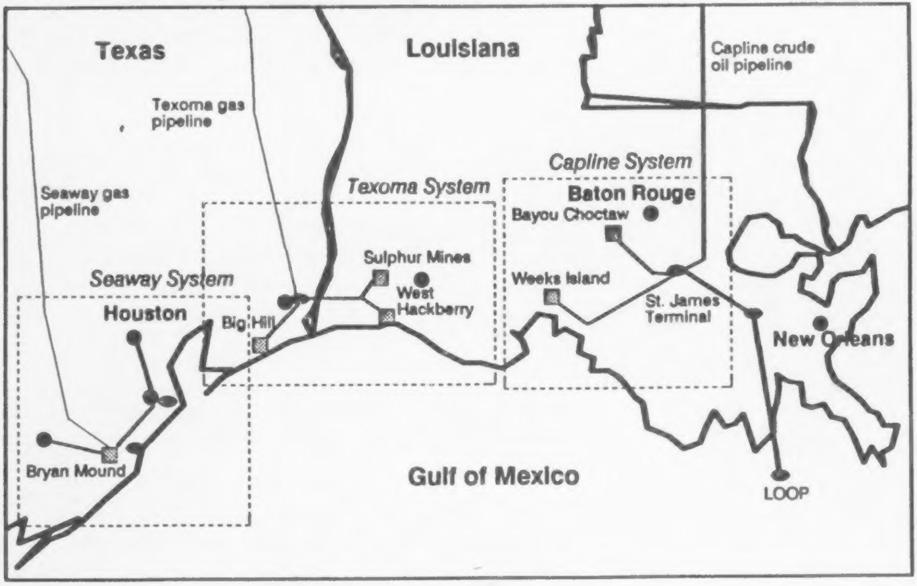
The fiscal year 1990 budget request for the Strategic Petroleum Reserve provides for the operation and maintenance of the Reserve, continued storage capacity development at the Big Hill and Bayou Choctaw sites, and projects which will enhance the drawdown and distribution capabilities of the Reserve. The request also provides for filling the Reserve at an average rate of 72,000 barrels per day in fiscal year 1990. This fill rate includes 50,000 barrels a day to be delivered under the terms for the sale of the Naval Petroleum Reserves and 22,000 barrels a day which the Department would acquire from the fiscal year 1990 appropriation for the SPR Petroleum Account.



FY 1990 Assumes 50,000 bbl/d from NPR purchaser(s) and 22,000 bbl/d of DOE purchases.

The fiscal year 1990 budget request for the Strategic Petroleum Reserve (SPR) is $321,961,000 and includes $194,999,000 for the Strategic Petroleum Reserve Account and $126,962,000 for the SPR Petroleum Account. The Strategic Petroleum Reserve Account funds all activities associated with the storage facilities development and operations, and management of the program, and the SPR Petroleum Account funds the acquisition and transportation of crude oil.

The U.S. Strategic Petroleum Reserve


Texas
Louisiana
Capline crude oil pipeline
Texoma gas pipeline
Capline System
Seaway gas pipeline
Texoma System
Baton Rouge
Bayou Choctaw
Sulphur Mines
Seaway System
Weeks Island
West Hackberry
Houston
Big Hill
St. James Terminal
New Orleans
Bryan Mound
Gulf of Mexico
LOOP

Strategic Petroleum Reserve Account

Storage Facilities Development and Operations

The fiscal year 1990 budget request for Storage Facilities Development and Operations is $181,877,000.

All surface construction for a 750 million barrel reserve will be completed by the end of fiscal year 1989. Solution mining at Bayou Choctaw and Big Hill is continuing on schedule, and when completed, the Strategic Petroleum Reserve system will have achieved its goal of a full 750 million barrels of capacity by the end of fiscal year 1991.

At the end of fiscal year 1990, the total underground storage capacity of the Reserve is expected to be 627 million barrels, located at the six sites as follows:

Bryan Mound	226 million barrels
West Hackberry	219 million barrels
Sulphur Mines	26 million barrels
Big Hill	27 million barrels
Bayou Choctaw	56 million barrels
Weeks Island	73 million barrels
Total	627 million barrels

Non-phase Specific

Non-phase Specific was established as a funding category within the Storage Facilities Development and Operations budget in fiscal year 1981. Since fiscal year 1986, all facilities-related activities, except site surface construction, have been funded within this category. All of the $181,877,000 requested for fiscal year 1990 is for Non-phase Specific activities.

Within the Non-phase Specific category, there are three subcategories of funding. These subcategories are Operations, Capital Improvements and Distribution Enhancements.

(1) Operations includes operations and maintenance (O&M), security, utilities (primarily electric power), ongoing environmental activities for all sites, continuing engineering, technical, analytical and logistics support, and contract services in support of operations activities. The fiscal year 1990 request includes $150,249,000 for Operations. The primary focus of fiscal year 1990 activities will be on maintaining all sites and systems in a state of operational readiness while continuing capacity development and oil fill.

(2) Capital Improvements addresses modifications to existing facilities to assure that mission objectives can continue to be met. Projects in this category usually require engineering design and analysis. Projects are identified as a result of operating experience and safety, reliability and vulnerability assessments and studies. The fiscal year 1990 request provides $15,733,000 for capital improvements. Major projects will include perimeter detection security enhancements at four sites, lightning protection at five sites, the Weeks Island service shaft and fill hole security enhancements and continued risk abatement tasks.

(3) Distribution Enhancements addresses changes in commercial distribution systems which limit the capability to distribute Strategic Petroleum Reserve oil during an emergency. The fiscal year 1990 request includes $15,895,000 in this subcategory. The ultimate goal of the program is to achieve a distribution capability equal to the planned drawdown capability of 4.5 million barrels a day by the end of fiscal year 1992.

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Current distribution enhancements in progress and those which will be initiated in fiscal year 1989 will increase distribution capability to approximately 3.5 million barrels a day by the end of fiscal year 1990.

Management

Management funding provides for all salaries and expenses necessary to plan and manage the Strategic Petroleum Reserve, including personnel at headquarters in Washington, those at the Oak Ridge Operations Office and those at the Project Management Office in New Orleans. In addition, the administrative overhead costs for the Project Management Office are funded from this category.

Management funding also provides for various kinds of information gathering, analytic work, and management and technical support used in making near-term and long-range management and policy decisions governing the accomplishments, goals, and objectives of the Strategic Petroleum Reserve program. The fiscal year 1990 request for Management is $13,122,000. The authorized staffing level for the fiscal year is 147 full-time equivalents (FTE's).

SPR Petroleum Account

Oil Acquisition and Transportation

Funds are appropriated to the SPR Petroleum Account for the purchase of crude oil, marine and pipeline transportation, customs fees, terminalling charges, environmental taxes and other necessary oil acquisition-related expenses. The fiscal year 1990 for the SPR Petroleum Account is proposed at $126,962,000. This funding reflects an advance fiscal year 1990 appropriation of $91,555,000, provided in the Interior and Related Agencies Appropriations Act for Fiscal Year 1989 (Public Law 100-446).

The fiscal year 1990 request assumes an average fill rate of 78 thousand barrels a day in fiscal year 1989 and a total fill of 583 million barrels by the end of the fiscal year. However, based on our cost experience during the first five months of the fiscal year and the current level of oil prices, we are now projecting an average fiscal year 1989 fill rate of about 70 thousand barrels a day and a year-end inventory of approximately 580 million barrels. This inventory is equal to approximately 94 days of 1988 net imports of crude oil and petroleum products.

We anticipate meeting our currently projected fill target for fiscal year 1989 through purchases under an existing agreement with Petroleos Mexicanos (PEMEX), Mexico's state-owned oil company. This is a two-year agreement executed on November 30, 1987, which provides for deliveries at an average rate of 65,000 barrels a day, plus or minus 10% as mutually agreed, subject to the availability of funds.

We propose to fill the Strategic Petroleum Reserve in fiscal year 1990 at an average rate of 72,000 barrels a day, of which 50,000 barrels a day would be delivered under the terms for the sale of the Naval Petroleum Reserves. We would purchase the remaining 22,000 barrels a day from the $126,962,000 requested in fiscal year 1990 for the SPR Petroleum Account. This fill rate would increase the inventory of crude oil in storage from the currently projected 580 million barrels at the end of fiscal year 1989 to 606 million barrels at the end of fiscal year 1990. This fill rate will require a waiver of the

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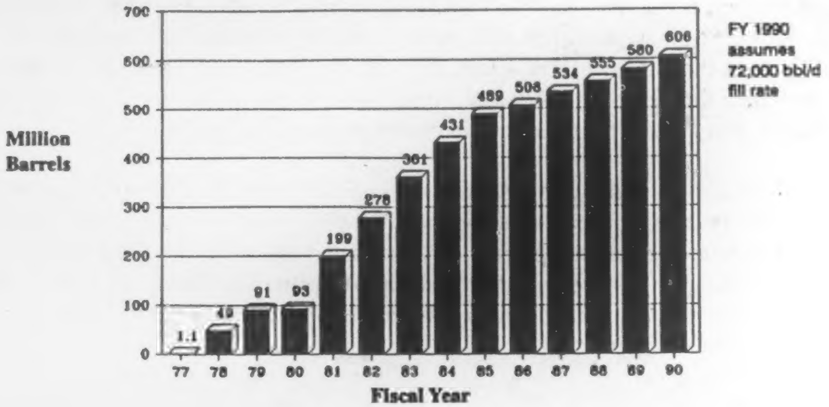
statutory Elk Hills shut-in sanction in the same manner as the waiver Congress granted for fiscal year 1989.

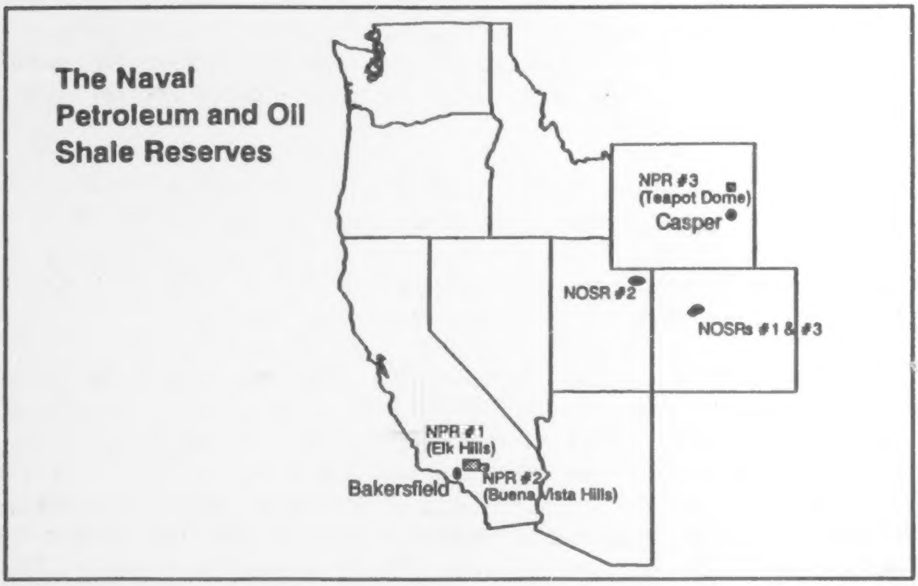
SPR Crude Oil Inventory



Fiscal Year 1990 Budget Request - Naval Petroleum and Oil Shale Reserves

Until a final decision is made on divestiture, the Naval Petroleum Reserves will continue to be produced at their maximum efficient rates under the management of the Department of Energy. Production is currently authorized through April 5, 1991.

The fiscal year 1990 budget for the Naval Petroleum and Oil Shale Reserves is $192,124,000. Any amounts appropriated but not required as a result of the sale of the Federal Government's interest in Elk Hills and Teapot Dome would be proposed for rescission.


The Naval Petroleum and Oil Shale Reserves
NPR #3
(Teapot Dome)
Casper
NOSR #2
NOSRs #1 & #3
NPR #1
(Elk Hills)
NPR #2
(Buena Vista Hills)
Bakersfield

Naval Petroleum Reserves No. 1 (Elk Hills) and No. 2 (Buena Vista)

Total daily production at Naval Petroleum Reserve No. 1 in fiscal year 1990 is expected to average about 91,000 barrels of oil, (the Government's share will be about 72,000 barrels), 364 million cubic feet of natural gas, and 637 million gallons of liquid gas products. Development will focus on increasing recovery efficiency through application of enhanced oil recovery techniques. The Naval Petroleum Reserve No. 2 is entirely leased to private companies with the government's share of production taken as royalty payments.

Fiscal Year 1990 Budget Request

The fiscal year 1990 budget request for Naval Petroleum Reserves No. 1 and No. 2 is $180,082,000. Funding is requested in the following categories:

Operations and Maintenance ($131,171,000) - Provides for the day-to-day field activities necessary to continue production at the maximum efficient rate (MER). Major activities to be funded are:

(1) Production Operations ($80,471,000) - provides for routine operation and maintenance of crude oil and gas production, distribution, processing and sales systems, buildings and facilities, waterflood and steamflood programs, electricity and power systems and the major remedial well work required to maintain existing wells in optimum producing condition. A total of 238 remedial workovers is planned for fiscal year 1990.

(2) Management and Administration ($27,000,000) - provides for general management, auditing, legal, secretarial and related support services, material control/warehousing, acquisitions (purchasing/subcontracts), and automated data processing.

(3) Technical Support and Assurance ($23,700,000) - provides for the engineering functions required to maintain reservoirs and facilities in optimum condition to comply with MER requirements. Specifically, this includes: production engineering, reservoir/geological engineering, drafting, reservoir studies, systems engineering, design engineering, and electrical engineering. Also provides for safety, security, environmental protection, and quality assurance programs such as waste management, air quality assurance programs, industrial hygiene, fire protection, safety inspections, and physical and personnel security.

Development Drilling ($11,009,000) - provides for the drilling of all development wells at Naval Petroleum Reserve No. 1. This includes water injection and enhanced oil recovery wells, in addition to production wells. Along with securing additional production, this program is designed to maintain reservoir and pool performance through pressure maintenance and to further define reservoir limits. The fiscal year 1990 funding provides for the drilling of 19 production wells.

Development Facilities ($33,017,000) - provides for the construction and/or modification of facilities needed to support continued development and production of the field. Included in this category are funds for facilities required for environmental and safety compliance, implementation of enhanced recovery methods, and facilities to accommodate changing field conditions, such as increased water and gas produced with crude oil. Major efforts in fiscal year 1990 will be directed at waterflood and steamflood programs, and the repair/replacement of aging or corroded oil, gas and water pipelines.

Exploration Drilling ($4,885,000) - provides for drilling one intermediate deep well, testing a Naval Petroleum Reserve No. 2 Stevens well and conducting a seismic data reprocessing program.

Naval Petroleum Reserve No. 3

The fiscal year 1990 budget request for Naval Petroleum Reserve No. 3 is $15,607,000 and includes funding for Operations and Maintenance ($12,890,000), Development Drilling ($2,284,000), and Development Facilities ($433,000).

Naval Petroleum Reserve No. 3, Teapot Dome, located near Casper, Wyoming, produced an average of 2,700 barrels of oil per day, 10 million cubic feet per day of natural gas, and 11,000 gallons per day of liquid gas products in fiscal year 1988. Production is estimated to decline to 2,300 barrels per day in fiscal year 1989 and is expected to increase to 2,500 barrels per day, with steamflood expansion, in fiscal year 1990. All natural gas produced, estimated to be about 10 million cubic feet per day in fiscal years 1989 and 1990, is reinjected for good reservoir management. Production of liquid gas products are estimated at 8,000 gallons per day in fiscal year 1989 and 6,000 gallons per day in fiscal year 1990. Substantial cost saving measures have been and will continue to be implemented at NPR-3 in order to maintain a net positive cash flow to the Government.

This request includes funding for the continuance of normal field operations and maintenance activities; continued development drilling, with 3 Second Wall Creek infill wells, 30 Shannon infill wells in areas not amenable to enhanced oil recovery; and 15 Shale wells planned for fiscal year 1990. Implementation of enhanced oil recovery projects will continue, including the purchase of a fourth steam generator.

Naval Oil Shale Reserves (NOSRs)

The fiscal year 1990 budget request for the Naval Oil Shale Reserves is $200,000. This request is for funds to continue land management activities at all the Naval Oil Shale Reserves and environmental monitoring.

Program Direction

The fiscal year 1990 budget request for Program Direction is $6,235,000. This funding provides for the salaries, benefits, travel, and other related costs to support 95 full-time equivalent (FTE's) plus military personnel required to plan, develop, manage and monitor the execution of Naval Petroleum and Oil Shale Reserves activities.

This completes my formal statement, Mr. Chairman. I will be pleased to answer any question you may have.

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BIOGRAPHY OF JOHN W. BARTHOLOMEW

John W. Bartholomew has served as Director, Office of Strategic Petroleum Reserve since October 1985. As Director, he is responsible for providing program direction for the development, management, maintenance and drawdown readiness of the Strategic Petroleum Reserve. Mr. Bartholomew assumed this responsibility after serving as Director of Systems and as Chief of Logistics for the Strategic Petroleum Reserve from 1979 to 1985.

The Strategic Petroleum Reserve program involves the planned storage of 750 million barrels of crude oil and includes development and maintenance of attendant storage facilities and drawdown/distribution systems capable of supplying up to 4.5 million barrels of crude oil to the U.S. economy in the event of a national energy emergency.

Prior to joining the Strategic Petroleum Reserve Program in 1979, Mr. Bartholomew served in engineering and management positions for the Department of Navy and the National Security Agency.

Mr. Bartholomew graduated from Virginia Polytechnic Institute and State University in 1966 with a B.S. degree in Electrical Engineering.

He is married and has two boys, the oldest of which will be entering Virginia Polytechnic Institute and State University in the fall of 1987 to major in Engineering.

Mr. Bartholomew is a native of Vienna, Virginia.

BIOGRAPHY OF ROBERT A. TAYLOR

Captain Robert A. Taylor has served as Director, Naval Petroleum and Oil Shale Reserves, U. S. Department of Energy (DOE) since September 1988. As Director, he is responsible for the custody, conservation, protection, development, operation, and production of the Naval Petroleum and Oil Shale Reserves.

The Naval Petroleum and Oil Shale Reserves consist of two petroleum reserves in California, one in Wyoming; two oil shale reserves in Colorado, and one in Utah. Captain Taylor reported to DOE following a June 1988 graduation from the National War College.

Captain Taylor has been an officer in the U. S. Navy since 1967. He has had numerous assignments in military facilities design and construction management, military readiness planning, facilities management, and with the Naval Construction Force (Seabees).

Captain Taylor is a registered professional engineer in mechanical engineering with the State of California. He attended Case Institute of Technology and Rutgers University.

He was born in Macon, Georgia and has maintained Cleveland, Ohio as his home of record while serving as a naval officer.

SALE OF THE NPR

Chairman **Byrd**. The proposed asset sale has been made before and Congress has not gone along with that suggestion. Have the parameters of the asset sale heretofore been the same as in this instance.

Mr. **Wampler**. No, Mr. Chairman. This represents a new approach to the sale. In essence, we had proposed in the beginning an outright sale of the naval petroleum reserves. We had modified that approach somewhat to try to ensure that we could capture any tremendous spike in oil prices and had made several modifications last year, but this represents an entirely different approach.

Chairman **Byrd**. What would the outright sale have produced by way of money?

Mr. **Wampler**. Well, there are many estimates that we have had. The closest one we can probably lay our finger on right now and the one we are using is about $3 billion in value of that asset.

Chairman **Byrd**. Was that a formal proposal heretofore?

Mr. **Wampler**. The proposal to sell was formal. We were never able to get legislation introduced. The legislation was drafted, but not introduced.

Chairman **Byrd**. So $3 billion was the asset sale proposal which the Congress previously turned down?

Mr. **Wampler**. Well, the range was $3.6 billion to $4.3 billion as I recall it. We used two ranges based on the discount rates and those kinds of things, but around that figure.

OPTIONS FOR FILLING THE SPR

Chairman **Byrd**. If the NPR asset sales does not go forward, how does the administration intend to satisfy the provisions of title 42, United States Code which prohibit the sale of NPR products if the strategic petroleum reserve is not filled at an average daily rate of 75,000 barrels per day and the budget request does not purport to meet that target?

Mr. **Wampler**. Well, we would certainly have to look at other options, among them being an NPR exchange, product produced from NPR being exchanged for product for SPR. This is an issue that certainly we would have to work with OMB and Congress on within the Gramm-Rudman-Hollings fiscal constraints.

Chairman **Byrd**. Could you provide one or two of the options at the moment?

Mr. **Wampler**. Theoretically, there are some options which we could pursue. One option would be to exchange the oil that is pumped from the naval petroleum reserves. We are producing somewhere close to 100,000 barrels per day out of the NPR. This option would involve an exchange of the crude oil that comes out of the NPR for the proper type of crude oil that we currently need in the strategic petroleum reserve. Another option, of course, would be coming back to Congress to talk about perhaps a supplemental appropriation or something on that order to solve the problem.

Chairman **Byrd**. Do you have any figures in mind?

Mr. **Wampler**. We can furnish you those exact numbers. The shortfall that we're expecting is close to $284 million.

[The information follows:]

OIL FUNDING SHORTFALL

The fiscal 1990 budget request for the strategic petroleum reserves [SPR] proposes the following appropriations for oil acquisition and transportation.

	Thousands
Fiscal year 1990 appropriation	$126,962
Advance fiscal year 1991 appropriation	37,458

These proposed appropriations assume that the SPR will be filled in fiscal year 1990 at a rate of 72,000 barrels a day, but that 50,000 barrels a day will be provided by the buyer(s) under the terms of the Department's proposed sale of Naval Petroleum Reserves No. 1 and No. 3.

If the sale does not go through, the shortfall in appropriations required to achieve the 72,000 barrels a day fill rate, if the budgeted oil prices hold, would be as follows:

	Thousands
Fiscal year 1990 appropriation	+$284,153
Advance fiscal year 1991 appropriation	+74,917

The budgeted oil prices are $15.57 per barrel for fiscal year 1990 and $16.42 per barrel for fiscal year 1991. The current delivered price is approximately $17.25 per barrel.

PEMEX CONTRACT

Chairman BYRD. Have you had any contingency discussions with the Mexicans about extending their petroleum supply contract if the NPR asset sale does not go forward?

Mr. WAMPLER. Well, the agreement that we have with PEMEX is the fourth one we have had since 1981. We can extend beyond 1989 for an undelivered balance, and we probably would intend to extend. We are going to get into the issue fairly soon, probably in the next fiscal year and certainly if we fill at the rate of 72,000 barrels per day. We are going to be needing a different type of crude oil which Mexico cannot supply to us. They simply don't have the supply. So, in any event, within a fiscal year we are going to be looking at going on the open market again in all probability because the PEMEX oil just simply will not suffice and we won't meet the specifications of the crude that we need.

Chairman BYRD. Why will it not meet the specifications?

Mr. WAMPLER. We are going to be needing to fill at least part of Big Hill, and we are going to be needing sweet crude. They are currently supplying sour. We have a mix, as you know, of crudes within the strategic petroleum reserve carefully calculated to meet all the overall refining needs of the country, and we have a scheme that calculates how much of each type of crude that we have. We, for example, have to have 65 percent sour and 35 percent sweet to meet all these refining needs. So simply the need for sweet will preclude a long, extended contract with PEMEX, as I say, probably within the next year if we're filling at 72,000 barrels per day.

CONTINGENCIES TO ASSURE SPR FILL

Chairman BYRD. Given the outright rejection of the NPR sale proposal in the past, shouldn't the Department be developing some contingencies to ensure the fill of the strategic petroleum reserve above the 22,000 barrel-per-day fill rate, which is all that could be sustained by an appropriation request of $127 million?

Mr. **Wampler**. That's correct, Mr. Chairman. We are hopeful that the new structure that we have will let us be successful in divestiture and working with Congress to get legislation passed.

We, however, as I mentioned earlier, do have some options that we have looked at. We have looked at exchanging oil from the naval petroleum reserve for oil for the strategic petroleum reserve. A second option would be to earmark the revenues coming from the sale of NPR oil to purchase oil for the filling of SPR. Those obviously are two options at the moment that we have taken a look at.

SUPPLY VULNERABILITY

Chairman **Byrd**. A daily fill rate of 22,000 barrels would add only 8 million barrels to the SPR over the course of fiscal year 1990. At our present rate of imports, that increment equates to a 31-hour supply. Over an entire year we would have reduced our strategic oil vulnerability by only 31 hours assuming the fill rate is limited to 22,000 barrels per day.

That doesn't sound like much progress, does it?

Mr. **Wampler**. It certainly doesn't for that amount of money. I think one thing that needs to be pointed out, Mr. Chairman, is that it would be almost impossible—and of course nothing is totally impossible—but to get this country in the situation that we would be subjected to a total cutoff of all of our oil imports is probably not possible. We have diversified our supply greatly since the last oil embargo, and if you look at the oil coming out of the Straits of Hormuz, there is something more than a year of supply in the strategic petroleum reserve. So in looking at supply vulnerability, I think you have to take that into consideration.

Chairman **Byrd**. The administration has argued in the past that given the overall budget deficit, the country cannot afford the $500 million or so that it would cost the U.S. Treasury to fill the SPR at a rate of 75,000 barrels a day.

Now if the minimum fill rate of 75,000 barrels a day is not achieved, how much revenue would the Treasury lose under the provisions of title 42 United States Code?

Mr. **Wampler**. About $500 million, if you shut in the naval petroleum reserves.

Chairman **Byrd**. So the Treasury would either spend approximately $500 million to fill the strategic petroleum reserve or it would lose $500 million in revenues from the product sales at the Elk Hills Naval Petroleum Reserve. It seems to me that under these circumstances filling the SPR at 75,000 barrels a day would be revenue neutral. Would you not agree?

Mr. **Wampler**. Under those circumstances, yes, sir. However, we also have expenses of about $200 million that decrease the net receipts.

Chairman **Byrd**. Would it be fair to assume that during a major supply disruption or even a partial supply disruption, as you were just hypothesizing, that the oil distributed from the SPR might have a value of perhaps 8 to 10 times the cost to purchase and store that oil in the reserve?

Mr. **Wampler**. Yes, sir; I've seen numbers that indicate that is correct.

Chairman **Byrd**. Would you provide for the record a specific scenario which assumes a U.S. petroleum supply disruption of 3 million barrels per day during the mid-1990's with a concurrent worldwide disruption in the range of 20 percent. Assuming this disruption lasted for 6 months, what would be the economic value of a 750-million barrel strategic petroleum reserve under such circumstances, what would be the value of an individual barrel of oil and what would be the ratio of benefits to costs.

Mr. **Wampler**. Certainly we'll supply that for the record, and, as you indicated, the value of the oil is much greater than simply the price of the oil.

[The information follows:]

DISRUPTION SCENARIO

Based on four runs of the Teisberg world model with various assumptions of demand elasticities and OPEC responsiveness in production, the following data were calculated. The calculations assume a 10 million barrel per day disruption, which is approximately 20 percent of the free world's oil supply, lasting 90 days with a pre-disruption price of $21.29/barrel. The United States' share of the disruption would be about 3 million barrels per day, since we use roughly one-third of world production.

CASE A:

If the elasticity of demand is high and OPEC production is responsive to world needs, the value of the SPR would be $48.8 billion or $122/barrel. Market oil price would be expected to surge to $49/barrel without use of the SPR but only to $29/barrel with SPR deployment. The $20/barrel saving due to use of the SPR applies to all U.S. crude consumption.

CASE B:

If the elasticity of demand is low and OPEC elects not to respond with a production increase, the value of the SPR would be $332.8 billion or $832/barrel. Market oil price would be expected to surge to $225/barrel without use of the SPR but only to $99/barrel with SPR deployment. As above, the $126/barrel saving due to use of the SPR applies to all U.S. crude consumption.

CASE C:

If the OMS model annual elasticities are used and there is a moderate OPEC production increase, the value of the reserve would be $79.6 billion or $199/barrel. Market oil price would be expected to surge to $80/barrel without use of the SPR but only to $44/barrel with SPR deployment. The $36/barrel saving due to use of the SPR applies to all U.S. crude consumption.

CASE D:

If OPEC nations respond with production increases and inelastic demands are assumed, the value of the reserve would be $184.8 billion or $462/barrel. Market oil price would be expected to surge to $140/barrel without use of the SPR but only to $38/barrel with SPR deployment. The $102/barrel saving due to use of the SPR applies to all U.S. crude consumption.

The ratio of benefits to costs is dependent upon the actual average cost/barrel of the completed reserve. Currently, the average for the inventory in place is about $27/barrel. If the remainder of the 750 million barrels is acquired at the average of 1989-94 prices projected by EIA, the effective average would drop to $25.15/barrel. At that price, the benefit to cost ratio would range between 4.9 and 33.1 to one over the extreme scenarios represented by cases "A" and "B" above. In the more moderate cases, "C" and "D", the ratios are 7.9 and 18.4 to one respectively.

The following data is based on Teisberg runs assuming a world oil market disruption of 10 MMB/D for 90 days and an initial oil price of $21.29/barrel. The drawdown is 400 MMB A 4.4 MMB/D.

	$/BBL Benefits	Market Prices	
CASE A			
HI ELAS	$122	No SPR	$49
HI OPEC RESPONSE		W/ SPR	$29
CASE B			
LO ELAS	$832	No SPR	$225
NO OPEC RESPONSE		W/ SPR	$99
CASE C			
OMS ANN ELAS	$199	No SPR	$80
MODERATE OPEC RESPONSE		W/ SPR	$44
CASE D			
INELASTIC DEMAND	$462	No SPR	$140
OPEC RESPONSE		W/ SPR	$38

Ratio of Benefits To Costs

AVG$/BBL COST OF THE SPR	CASE A	CASE B	CASE C	CASE D
$22	5.5	37.8	9.0	21.0
$23	5.3	36.2	8.7	20.1
$24	5.1	34.7	8.3	19.3
$25	4.9	33.3	8.0	18.5
$26	4.7	32.0	7.7	17.8
$27	4.5	30.8	7.4	17.1
$28	4.4	29.7	7.1	16.5
$29	4.2	28.7	6.9	15.9
$30	4.1	27.7	6.6	15.4
VALUE OF THE SPR (BILLIONS)	$48.8	$332.8	79.6	184.8
SPR VALUE PER BBL	$122	$832	$199	$462

OIL PRICE PROJECTIONS FY 88 $

YEAR $/BBL

1989 18.41
1990 18.61
1991 18.72 1992 18.71 (BILLIONS) 1993 19.62
$15,417 CURRENT FILL
1994 21.29 $3,442 FILL TO 750
AVG 19.23 $18,859 TOTAL 750
$25.15 AVG $/BBL TOTAL

PETROLEUM SUPPLY DISRUPTION

Chairman **Byrd**. In past years, departmental witnesses have testified that the likelihood of a severe petroleum supply disruption before the year 2000 is very probable. Does the Department still assume that probable likelihood? What is a probable likelihood?

Mr. **Wampler**. Mr. Chairman, let me try to answer it this way. We constantly try to evaluate the possibilities of supply disruptions. We feel generally that we are not in a crisis situation right now. We are very concerned about rising imports, and as imports rise and perhaps suppliers don't remain as diversified as they have been, certainly there is a lot of area for concern. But as far as calculating that there will be a major supply disruption in the next 10 years, I don't know that I can do that. It's somewhat of a guess, and it would be very hard to predict. I think just the risk of that does, however, make the strategic petroleum reserve, very, very important to us. It's the only insurance policy that we have.

BUDGET PRIORITIES

Chairman **Byrd**. Then with the probability, or let's say possibility of a severe oil supply disruption and given the very sizable benefits in excess of costs for the SPR during such a disruption, why isn't the administration pursuing the oil fill for the SPR more aggressively?

Mr. **Wampler**. It simply is a balancing of budget priorities. As you recall, last year the administration changed its position in favor of a 100,000-barrel-per-day fill rate. That marked the first time in many years that that had happened within the administration.

We all immediately, Congress and the administration, got into some pretty severe budget constraints at appropriations time and realistically just had to push that rate back to a minimum of 50,000 barrels a day. We did somewhat better last year than that. We filled at 57,000 barrels per day.

It's simply a matter of budget priorities, but the administration is committed to filling this reserve, and we feel it's very, very important. I think that if we are successful with the attempt to get Congress to approve divestiture legislation at 72,000 barrels per day, we are well on our way with a very healthy, aggressive fill rate, and I would hope that would happen.

Chairman **Byrd**. What's the probability, in your judgment, looking at it from your side of the table, of that happening?

Mr. **Wampler**. It's difficult for me to quantify that. I think that we have at least an even chance that we can make that happen. I have seen at least some Members that seemed to like the structure that we have proposed in the sale for the first time because of its connection directly to the strategic petroleum reserve and directly to a defense petroleum inventory. So I'm encouraged.

EXPANSION OF SPR

Chairman **Byrd**. During the 5-year period of 1981–85, the SPR was filled at an average daily rate of 217,000 barrels. However, during the last 4 years, the rate has averaged only 62,000 barrels per day.

If I'm correct, it seems to me that we are mortgaging our future to meet our present budgetary requirements.

The fiscal year 1989 Interior bill included a requirement that the Department review the appropriateness of expanding the presently planned reserve from 750 million barrels to a 1-billion-barrel capacity. That analysis was required by the Congress by April 1, 1989. Several preliminary studies have been delivered to the committee previously. It is my understanding that the net benefits of the expanded 1-billion-barrel reserve exceed those of the planned 750-million-barrel reserve in almost all scenarios tested. Would you say that is an accurate statement?

Mr. **Wampler**. I would say that's accurate.

Chairman **Byrd**. Has the Department taken a formal position thus far with regard to an expanded SPR?

Mr. **Wampler**. No, Mr. Chairman, we have not. As you have mentioned, the report is due on April 1. The report is on track and we intend to have it to Congress by April 1.

The report looks at several things, the advisability of drawdown capability improvements, the preferable site locations, what it would cost to build capacity to 1 billion barrels and what the oil acquisition prices would be.

We are not asked in the report to necessarily take a position. This is an issue that will get a lot of discussion, I can assure you, in the administration in the next several months, and at some point in time the administration will be ready to take a position. Right now the position is still that our immediate goal is the 750 million barrels strategic petroleum reserve as both Candidate Bush and President Bush has stated before, but it's an item that will be addressed by the administration.

Chairman **Byrd**. At what level within the administration has the expansion question been reviewed?

Mr. **Wampler**. It has been discussed at a mid or upper level with the Office of Management and Budget, it has been discussed in the Department of Energy at least tentatively with the new Secretary, and I would suspect that it will be discussed at the Cabinet level.

Chairman **Byrd**. Do you have any understanding as to whether or not the administration will indeed, what is your guess, as to whether it will indeed take a position on the expanded reserve within the next 2 or 3 months?

Mr. **Wampler**. I think that there will be a position taken within that timeframe, yes, sir.

Chairman **Byrd**. Given the planned progress on the 750-million-barrel reserve now underway with 563 million barrels in storage, isn't it logical that planning for the expanded billion barrel reserve should be initiated no later than fiscal year 1990 if in fact the decision is made to go ahead with a larger reserve?

Mr. **Wampler**. Yes, sir; that's true.

COSTS ASSOCIATED WITH EXPANSION OF SPR

Chairman **Byrd**. What would be the logical planning and related initial costs for the first year of the expansion increment?

Mr. **Wampler**. The initial planning, which includes the environmental studies that would have to be done, would cost about $7 million.

Chairman **Byrd**. $7 million?

Mr. **Wampler**. $7 million, yes, sir.

Chairman **Byrd**. And that would include the environmental studies?

Mr. **Wampler**. Yes, sir.

DISTRIBUTION ENHANCEMENT

Chairman **Byrd**. The planned distribution capacity for the 750 million barrel SPR is 4.5 million barrels a day. This budget contains, I believe, some $10 million for interconnections at the private oil terminals in the Lake Charles, LA area. It is my understanding that the Department will have spent another $35 million on an oil pipeline to connect these two private terminals with the West Hackberry, LA site. Have negotiations with these two terminals been completed?

Mr. **Wampler**. We have had some difficulty with the operators of existing marine terminals in providing additional SPR access at what we consider to be the reasonable rates. We have gone out with solicitations, and they have not been successful. We intend to go back and discuss again and put out another solicitation in May to try to convince them to work with us to improve these distribution enhancements. We have actually canceled two solicitations because we got unacceptable responses.

The private sector operators are basically saying to us that we should install new dock facilities rather than share the facilities that they have on commercial line. We intend to address this very aggressively within the next 2 or 3 months and look at all the options that we have, like building our own facilities as a last resort.

Chairman **Byrd**. What will you do if the private companies refuse to be hooked up to your distribution pipeline?

Mr. **Wampler**. We will have to look at building a new facility like the St. James terminal that we currently have.

Chairman **Byrd**. Would you say that such a refusal is very likely?

Mr. **Wampler**. I would say there is probably a 50-percent chance that we'll be faced with that. We are going to try to be as convincing as we can in our arguments, but there is a chance that we will not be.

Chairman **Byrd**. Would you please present to the committee within the next 2 months a contingency distribution enhancement plan with all related construction costs in the event that you are not permitted to hook up to these two private terminals.

Mr. **Wampler**. Certainly, Mr. Chairman.

NAVAL PETROLEUM AND OIL SHALE RESERVES

Chairman **Byrd**. We will now turn to the naval petroleum and oil shale reserves.

Do you have any other witnesses you would like to present for this activity?

Mr. **Wampler**. No, Mr. Chairman. Captain Taylor is at the table.

Chairman **Byrd**. All right.

The fiscal year 1990 request is $192,124,000, which is $7,053,000 or 4 percent over the fiscal year 1989 enacted level.

As you have indicated in your testimony, the administration is once again proposing to sell the Federal Government's ownership interests in the Naval Petroleum Reserves No's. 1 and 3 at the end of fiscal year 1990. The terms of the proposed sale would require a cash bonus payment in fiscal year 1990, plus certified commitments to deliver specification oil for the strategic petroleum reserve at an average rate of 50,000 barrels per day in fiscal year 1990 through fiscal year 1995, which I believe you said is inclusive, meaning 6 years instead of 5.

Mr. **Wampler**. Yes, sir.

Chairman **Byrd**. And a total of 10 million barrels of oil for a defense petroleum inventory during fiscal year 1991 and fiscal year 1992. The cash bonus payment is expected to be $1 billion or more.

The sale of the Federal Government's interest in the naval petroleum reserves will require authorization from the Congress. Has the administration sent forward a legislative proposal yet?

Mr. **Wampler**. No; the administration has not, Mr. Chairman, at this point sent it forward. We are currently working on such a package and it's nearing the time that it will be completed.

Chairman **Byrd**. The sale proposal was originally submitted as part of the fiscal year 1990 Reagan budget request. Have you received any new or additional guidance from the Bush administration regarding the sale of the naval petroleum reserves?

Mr. **Wampler**. President Bush has simply reaffirmed President Reagan's budget request and has not issued at this point any new guidance.

Chairman **Byrd**. So it's the Reagan/Bush budget.

Mr. **Wampler**. Yes, sir.

Chairman **Byrd**. What is your estimate of the total value of the administration's proposed sale of the naval petroleum reserves, and I believe you indicated that.

Mr. **Wampler**. It's around $3 billion.

IMPACT OF NPR SALE ON BUDGET DEFICIT

Chairman **Byrd**. You indicate in your statement that sale of the naval petroleum reserves "would contribute materially to the reduction of the Federal deficit in fiscal year 1990." How much of the money that you estimate would be derived from the proposed sale would be credited to the fiscal year 1990 Gramm-Rudman-Hollings deficit reduction target?

Mr. **Wampler**. Around $1 billion, Mr. Chairman, or whatever the upfront bonus is.

Chairman **Byrd**. Gramm-Rudman-Hollings, as I understand it, exempts asset sales.

Mr. **Wampler**. I was not aware of that, Mr. Chairman, but we'll check on that and provide it for the record.

Chairman **Byrd**. In which case the answer would be no.

Mr. **Wampler**. If that exemption is in there, yes, sir.

[The information follows:]

APPLICABILITY OF DIVESTITURE RECEIPTS TO DEFICIT REDUCTION

The United States Department of Energy is not anticipating any of the cash receipts of $1 billion or more, received as a result of the proposed Naval Petroleum Reserves divestiture, to be credited toward the annual deficit targets established by budgetary law. By applicable budget law and agreement between the Congress and the Executive Branch of the Government, asset divestiture cash receipts are not to be counted in the budget for purposes of the Gramm-Rudman-Hollings limitation on the deficit.

All cash revenues of the sale would be available as receipts to the Treasury, however, and, accordingly, will reduce the federal debt, and because of that reduction, the current borrowing needs and future interest payments by the Treasury will be reduced. That reduction in interest payments would, we believe, impact beneficially on the accounting related to Gramm-Rudman-Hollings.

LONG-TERM IMPACT OF NPR SALE

Chairman **BYRD**. Realizing that there may be near-term deficit reduction advantages resulting from your proposed NPR sale, what long-term effect will the loss of the NPR revenues have on the deficit?

Mr. **WAMPLER**. Since the moneys in essence that we would be receiving must include the 50,000 barrels per day of SPR oil, we have to calculate those in some terms as dollars. It's simply earmarking and guaranteeing that we would get a fill rate irrespective of the price of oil and irrespective of what budget numbers we had in the out-year budgets.

So in terms of actual impact on the budget, it's hard to say. It would simply have whatever effect that fill rate would have in terms of dollars and cents on the budget annually. The SPR oil funds are not shown in the budget, but as far as the effect, it simply would be a guarantee of that 50,000 barrels per day at whatever price happened to be in effect at the time.

For example, if we had some substantial spike in prices, it could have much more effect on the budget than obviously it would at a lower price.

Chairman **BYRD**. Let's go over that question again. Realizing that there may be near-term deficit reduction advantages resulting from your proposed NPR sale, what long-term effect will the loss of the NPR revenues have on the deficit?

Mr. **WAMPLER**. It really should be a wash because you're simply taking what would be a revenue from one source and using it to buy another Federal asset. So it should be a wash, but there is some guaranteed protection in there and some guaranteed advantages if you have a large price spike. That 50,000 barrel provision is irrespective of price. Whatever the price is, the buyer would be obligated to furnish 50,000 barrels.

Of course, on the other hand, if you are still operating the naval petroleum reserves, presumably you would be getting the advantage of that same price spike in revenue. So it's a wash, as I see it, Mr. Chairman.

Chairman **BYRD**. If we extend that 750 million barrels to 1 billion, the 50,000 barrels are only good through fiscal year 1995. So what would happen then, would it still be a wash?

Mr. **WAMPLER**. Well, if the extension was made to a 1 billion barrel SPR, obviously the 250 million barrel expansion would, in my opinion, have to be covered by appropriated funds. I think that you will deplete the worth of the naval petroleum reserves by this scheme of $1 billion or more cash up front, plus 50,000 barrels through 1995, plus a 10 million barrel defense petroleum inventory. So I'm sure we would have to look at the increment for the 250 million barrels separately from this issue of divestiture.

One point I might make, Mr. Chairman, is the naval petroleum reserve is a mature field and the production is declining. So the revenues are going to be declining obviously, annually.

NPR/SPR OIL SWAP

Chairman **Byrd**. Does the administration have authority under existing law to swap naval petroleum reserve oil for oil which would be deposited in the strategic petroleum reserve?

Mr. **Wampler**. Yes, Mr. Chairman, we do have authority.

Chairman **Byrd**. If the authority to swap NPR oil already exists, why doesn't the administration simply use that authority to help fill the strategic petroleum reserve?

Mr. **Wampler**. That would be the second on our list of priorities if divestiture is not successful. One of our best options is to look at that swap.

Chairman **Byrd**. So you will look at that.

Mr. **Wampler**. Yes, sir.

Chairman **Byrd**. Revenues that are generated through the sale of NPR oil are currently deposited in the miscellaneous receipts account in the Treasury. Has the administration considered seeking authority to allow these revenues to be placed in the strategic petroleum reserve account for the acquisition and transportation of crude oil for the SPR?

Mr. **Wampler**. That is certainly another option that we will look at lieu of divestiture, Mr. Chairman.

Chairman **Byrd**. Has the administration considered seeking authority?

Mr. **Wampler**. Not at this point. We would certainly like to put forth our best efforts on divestiture and have certain backup options in place in case we are not convincing in our argument to do that, but we have not looked at that in detail at this point in time.

Chairman **Byrd**. Wouldn't this approach allow us to maintain the SPR fill rate, reduce the deficit by using NPR revenues for SPR crude oil purchases rather than appropriated funds and preserve access to the NPR revenues for use after the SPR fill is complete?

Mr. **Wampler**. It would let us do that, but we would have to somewhere in the budget process find around $500 million to accommodate that, and that's certainly very difficult. Also, if you look at the charts that show the decline in NPR production, it is declining fairly sharply, and into the out-years you can get into some problems on swap supplies, revenue supplies or revenue amounts on this kind of thing.

Chairman **Byrd**. It's not declining that rapidly, is it?

Mr. **Wampler**. It's declining rapidly. In 1992 we are projecting it to be down from 80,000 barrels a day to approximately 65,000 barrels a day for the Government's share of the NPR production. So it is a very mature field.

Chairman **Byrd**. But if you can swap that, or rather if you can put those revenues in the SPR petroleum account and thus save the appropriations one hundred and——

Mr. **Wampler**. Well, in fiscal year 1992, for example, it would buy you approximately 65,000 barrels per day, less operating expenses. You would have to deduct from the amount available the operating expenses of the naval petroleum reserve, which would be $150 million roughly. That would buy you that much oil for fiscal year 1992.

We think it's preferable to sell the NPR to guarantee our supply of 50,000 barrels a day to be supplied by the purchaser of the NPR for fiscal year 1990 through fiscal year 1995 plus the 22,000 barrels the administration is proposing to seek through appropriations for SPR fill.

DIVESTITURE COSTS

Chairman **Byrd**. Well, the operating expenses are a given anyhow, aren't they? You're going to have them one way or the other, aren't you?

Mr. **Wampler**. My point is if the field was divested, you would not have the operating expenses, and you have a guaranteed source of 50,000 barrels per day plus the billion dollars cash bonus up front.

Chairman **Byrd**. What would be the cost of divestment?

Mr. **Wampler**. That would have to be negotiated, assuming we use an investment banker for this, and I would assume the current plans are that we would. Generally, they charge a fixed fee plus a percentage of the sale price to handle the divestiture.

Chairman **Byrd**. Have you any estimate of the total divestiture costs?

Mr. **Wampler**. $2 to $5 million.

Chairman **Byrd**. How much?

Mr. **Wampler**. $2 to $5 million.

Chairman **Byrd**. That way you can turn it over lock, stock and barrel then.

Mr. **Wampler**. Yes, sir, you can.

NEED FOR DEFENSE PETROLEUM INVENTORY

Chairman **Byrd**. I have always viewed the SPR as an energy and national security asset. Why do we need a defense petroleum inventory as well?

Mr. **Wampler**. Well, the defense petroleum inventory was actually designed as a replacement for the naval petroleum reserves. It's a 10 million barrel capacity cavern from which, at the call of the Secretary of Defense, without going through the normal drawdown procedure that is set up for the strategic petroleum reserve for specific defense needs, the Secretary of Defense could draw down 10 million barrels of oil, assuming that he needed access quicker than the normal process of drawing on the strategic petroleum reserve took.

A defense decision that the drawing down of the strategic petroleum reserve is a national security economic decision could at times be simply triggered by a sharp increase in price rather than by some implication of defense. So, that's the reason for having these separate. It would be dedicated to separate storage, and they could get a drawdown rate of perhaps 150,000 barrels per day. You compare that to the declining rate at the naval petroleum reserve, plus the fact that the naval petroleum reserve is pretty well landlocked, and it gives the Defense Department far greater flexibility than they currently have.

Chairman **Byrd**. How much insurance would that give the Defense Department, 10 million barrels?

Mr. **Wampler**. It's really hard to say. We can take a look at that and furnish you some additional information on it. It gives them 150,000 barrels a day of oil in the pipeline that they would be able to trade for what they really need, and those are refined products. It's almost a bonus on top of the Defense Production Act under which they have rights to acquire other crude stocks. In fact, once the strategic petroleum reserve oil hits the pipeline at 3.5 million barrels per day, they have ways that they can acquire that product. This simply gives them a little bit of extra insurance.

As to what the exact ramifications are when you look at their total consumption daily, I don't know, but I will find that out for you.

[The information follows:]

Value of the DPI in an Emergency

The 10 million barrel Defense Petroleum Inventory (DPI) provides excellent insurance for the Department of Defense (DOD) in the event of an energy emergency and has a number of advantages. The DPI clearly permits a faster and more flexible resupply than the Naval Petroleum Reserves in an emergency, whether the Secretary of Defense needs oil at the beginning of an energy emergency or whether he is responding to a unique DOD problem at home or abroad.

The DPI can be drawn down by DOE at the request of the Secretary of Defense rapidly (in a month or two), if necessary—at rates as high as 150,000 barrels per day; the NPR's have limited production, currently estimated to fall below 50,000 barrels per day in the mid-1990's. The DPI would be strategically located, with access to major pipelines and ports on the Gulf Coast; the NPR's are located inland in California and Wyoming, and oil would probably have to be exchanged in order to meet DOD needs.

The Secretary of Defense could immediately respond to a variety of emergency situations with a Gulf Coast DPI. For example, if the U.S. were to protect Persian Gulf shipping again and a shortage of DOD-available fuel hampered our efforts, oil could be supplied on an emergency basis directly or through an exchange from the DPI. In fact, oil could be rapidly withdrawn from the DPI and transferred or exchanged to alleviate DOD price or supply problems anywhere in Europe or the Middle East; areas where most DOD contingency operations are expected to occur. The Secretary of Defense could not react as quickly or as efficiently if he had to depend on the NPR's which have a slower response time, much smaller monthly supplies of oil, and less flexible and poorly located logistics.

ENERGY EMERGENCY AUTHORITIES

Chairman **Byrd**. In the event of an emergency, does the Secretary of Energy have discretionary authority—you a moment ago said that they have authority. Were you speaking of the Secretary of Defense or were you speaking of the Secretary of Energy doing that on behalf of the Department of Defense?

Mr. **Wampler**. When I was speaking of the Secretary of Defense, I was talking specifically about the Defense Production Act. The Secretary of Energy has further authorities in any drawdown situation to take up to 10 percent of the stock of a strategic petroleum reserve drawdown and direct it to any single entity. I'm assuming that includes the Department of Defense or whatever route that he would deem appropriate.

NPR DIVESTITURE STUDIES

Chairman BYRD. Congress has specifically limited to $500,000 the amount of appropriated funds that may be used by the executive branch for soliciting proposals, preparing or reviewing studies or drafting proposals designed to aid in or achieve the transfer out of Federal ownership, management or control, in whole or in part, the facilities and functions of the naval petroleum reserves. How much of the $500,000 has been spent to date?

Mr. WAMPLER. Mr. Chairman, it's not easy to audit, but I think it's safe to say that we've spent most of it, if not all. Until we get resolution on this item, we are currently not doing anything other than some basic in-house work that would be chargeable to this $500,000. Our general counsel is currently looking specifically at the question as to whether that was a 1-year ban or a forever ban, and we expect an opinion from them to be forthcoming very shortly. And we expect, once we get that, to come up and work with the staffs in Congress to try to get that issue resolved. But it's safe to say that we have expended most, if not all of those funds.

Chairman BYRD. If you have reached the funding limit, how are you now able to pursue the sale proposal?

Mr. WAMPLER. Well, we have not at this point in time done any additional consulting studies. We have cut those off. We have not done any major staff work. We have done some staff work that is almost an aside from the normal operating information that we have to gain, but we are keeping a very low profile until we get this issue resolved.

Chairman BYRD. So you are waiting on the general counsel's interpretation.

Mr. WAMPLER. We are waiting on an interpretation and then subsequent discussions with Congress.

Chairman BYRD. How long has the general counsel been looking at this question?

Mr. WAMPLER. We have been looking at it for probably 2 to 3 months. I might tell you, Mr. Chairman, we have some differences of opinion as to what that specific language means.

FOREIGN INVESTMENT IN THE NPR

Chairman BYRD. Would the prospective buyers be limited to U.S. firms?

Mr. WAMPLER. There is nothing in the legislation that prohibits foreign investment in or foreign buyers from purchasing the naval petroleum reserves. The Department would reserve the right to reject any and all bidders, and we would look at any potential buyer from the standpoint of determining whether the sale would be in the best interests of this country.

Chairman BYRD. So the Japanese could end up being the buyer potentially.

Mr. WAMPLER. Yes; that's true. I think an important point to note is that if it was bought by a foreign company, they would be restricted under current law from exporting the product anyway. We would simply have to look at the potential of some buyer buying it to shut it in, and I think that is probably not a very likely event.

MAXIMUM EFFICIENT RATE OF PRODUCTION

Chairman BYRD. I understand that in fiscal year 1981 oil production at NPR-1, Elk Hills, averaged 172 barrels per day. For fiscal year 1990 you are estimating daily production at NPR-1 of 91,000 barrels.

With production declining, have you changed any of the factors used to calculate your maximum efficient production rate, or is the decline attributable entirely to the fact that the Elk Hills Reserve is an aging production field?

Mr. WAMPLER. It's attributable, Mr. Chairman, to the fact that it's an aging production field. We are still calculating MER's the same as we were, and we certify those, as I recall, twice a year, but we have made no change in the way we are calculating the maximum efficient rate.

Chairman BYRD. In your budget justification you state that 19 development wells are planned for fiscal year 1990. How did you arrive at that number?

Mr. WAMPLER. Those, I'm told by Mr. Furiga, are just the number of wells that we did for maintenance of production. They are not new exploration wells. That's how we arrived at the number that we drill.

Chairman BYRD. Have there been any production decisions regarding the operation of the Elk Hills Reserve from which the private partner, Chevron, dissented during the last 2 years?

Mr. WAMPLER. Nothing that required any resolution above the field level. I have seen in my normal discharge of duties regarding approval of the MER's, several lively discussions about maximum efficient rate, but those are always resolved at the field level. Nothing has come to my level that I'm aware of. So if there is something, I'm certainly not aware of it.

STEAMFLOOD EXPANSION AT TEAPOT DOME

Chairman BYRD. The budget justification states that oil production is expected to increase at Teapot Dome, NPR-3, from 2,300 barrels per day in fiscal year 1989 to 2,500 barrels per day in fiscal year 1990 as a result of steamflood expansion.

What is the estimated payback period for the $433,000 requested in your fiscal year 1990 budget for purchase of the fourth steam generator at Teapot Dome?

Mr. WAMPLER. It is, Mr. Chairman, fairly short. I simply don't have that number in front of me, but when we made the decision, it showed a very good payback, and that's the reason we made the decision. I will furnish you that very quickly.

Chairman BYRD. All right.

[The information follows:]

NPR-3 STEAM GENERATORS

Each of the five steam generators planned for NPR-3 was planned on the basis of expected production increases of approximately 300 barrels of oil per day (BOPD). Each generator will be used to inject steam into five 10-acre patterns for 4 years each, for a total expected life per generator of 20 years. To date, two generators are operating at NPR-3. The second generator came on line in December 1988, and it is too early to have data from its effects on production. The first generator was operated at half capacity for calendar year 1988, and production increases for this period ranged from 109 BOPD to 168 BOPD. The results of the NPR-3 pilot project, which began in 1985, have shown that each generator, including the fifth, can be expected to increase total production by 2.3 million barrels over its lifetime of 20 years, for a total recovery from all five planned generators of 11.3 million barrels. This is an expected increase from the Shannon reservoir of 141 percent over the projected primary recovery of 8.0 million barrels.

A third generator has been funded for fiscal year 1989 and is being evaluated. A major factor in the evaluation is the price of oil. At about $14 per barrel, the capital investment of a steam generator becomes feasible.

The fourth and fifth steam generators planned for purchase in fiscal year 1990 and 1991, respectively, each would increase production approximately 300 BOPD for the 20-year life. If oil remains above $17 per barrel, as it has for the past 2 months, the payback period for each investment is just over 2 years.

ADDITIONAL STEAM GENERATORS FOR TEAPOT DOME

Chairman BYRD. Would additional funding for more steam generators than is provided for in the fiscal year 1990 budget request lead to more efficient production at Teapot Dome?

Mr. WAMPLER. We are looking at one more steam generator. In addition, we are also looking at some novel enhanced oil recovery out there, including microbial, that we have not evaluated yet. We are going to be several more months in getting that evaluation. So we are looking at possibly the addition of one more.

Chairman BYRD. How much do you contemplate that the addition of one more would increase production?

Mr. WAMPLER. It's very difficult to say right now, Mr. Chairman. I can take a look at that and let you know. I simply don't know. Captain Taylor, do you?

One thing that the Captain reminded me that I should have pointed out is that we have consistently tried to operate Teapot Dome and have operated Teapot Dome making our decisions as the private sector would. We try to keep that operation at a given level of profit, and the addition of the next steam generator depends entirely on the price of oil. If the price of oil increases, then that would be justified. But we have operated that field to the point that we have demanded certain percentages of profit from that operation, just like the private sector would. So it's dependent on the price of oil.

Chairman BYRD. And would you identify how much additional funding could be used for more efficient production at Teapot Dome and what the payback period for the additional investment would be.

[The information follows:]

COST FOR NPR-3 STEAM GENERATORS

The addition of each new steam generator by itself requires an investment of approximately $2.2 million—about $433,000 for the purchase of the generator plus an additional $1.8 million for installation (e.g., drilling wells, installation flow lines and electrical connections). In order to bring generators No. 4 and No. 5 on line at NPR-

3, an additional $670,000 has been estimated for the necessary expansion of existing water treatment facilities.

The purchase and installation of the steam generators have been phased over time so that the investments are spread out over a number of fiscal years. This has been done for a number of reasons. First, technically it is preferable to space the generators out so that the results can be analyzed and lessons learned taken into account for each new project. While the phased approach delays increased production (and costs), it does not adversely affect ultimate recovery. Second, as a matter of policy, we have an objective of realizing an annual profit of rate of return at the Reserve of about 15 percent. Acceleration of the planned schedule for the five generators, in light of the initial investment costs and current oil price forecasts, would impair our ability to meet this policy goal. Thus, for technical and financial reasons, we do not recommend abandoning the phased approach to installation of the steam generators.

NAVAL OIL SHALE RESERVES

Chairman BYRD. Now let's talk about the naval oil shale reserves.

I'm concerned about the potential drainage of the naval oil shale reserves gas resources resulting from commercial development adjacent to the reserve.

Does the fiscal year 1990 budget request include sufficient funding to continue adequate protection for the gas resources?

Mr. WAMPLER. With the 1989 reprogramming of $3.67 million, which was recently approved, we envision drilling eight wells on the border of that property in fiscal year 1989. That does not solve the problem, but it tends to mitigate it for the immediate future. We also are entering into communitization agreements with the local operators out there, but we're going to have to take a very hard look at the gas protection plan for the whole field because we have seen a great deal of drilling on the border that could result in the loss of Government-shared gas through migration off the border.

What we plan to do is to prepare to send legislation to Congress that would improve the way that we can protect this gas, including the possibility of leasing some of the Government land under somewhat the same system that the Department of the Interior does with their normal gas leases. We are trying to develop communitization agreements and we are trying to go out to the open market with the gas produced from a couple of wells. We had drilled a couple and had to shut them in because we couldn't find the market for the gas.

It just seems reasonable to me that since the private sector is drilling a lot of wells there, there is a market for the gas and perhaps we need to revise our procurement sales procedures. We are currently looking at doing that.

So once the legislation gets up here and once we decide exactly how we are going to handle this, whether it's by full development or by leasing, then we will know what kinds of funds we need and we would intend to handle that with a reprogramming, if we need funds.

Chairman BYRD. Have any new private wells been drilled adjacent to the NOSR-3 during the past year?

Mr. WAMPLER. Yes; there have been at least eight, and there could be more. We have that information.

Chairman **Byrd**. Would you supply that information for each of the past 5 years?

Mr. **Wampler**. Certainly, Mr. Chairman.

[The information follows:]

NOSR-3 Gas Protection Plan

Three gas fields—Rulison, Parachute, and Grand Valley—are located adjacent to NOSR-3. In the 1980–84 period, drilling was concentrated in the Rulison Field. The 1985–87 period saw the encroachment of new wells in the Parachute Field area of NOSR-3. The Grand Valley Field is experiencing greater drilling activity at present and is being closely monitored.

During the past five years, 9 wells have been drilled directly adjacent to the NOSR-3 border, all in the Parachute Field. In this context, we consider any well drilled on sections of land which would include NOSR-3 lands under normal Colorado spacing orders, as being adjacent. However, during this same period, an additional 34 new private wells have been drilled within 2 miles of the NOSR-3 boundary. Of these wells, 25 have been drilled in the Parachute Field and 9 have been drilled in the Grand Valley Field. All of the Rulison Field wells within 2 miles of NOSR-3 were drilled prior to 1984 except 2 wells were staked in January 1989. Of the 43 wells drilled, 41 were producers and 2 were dry holes.

THREAT TO DRAIN GAS RESERVES

Chairman **Byrd**. How has the Department countered this threat to drain the gas reserves of NOSR-3, and specifically what would be done under the fiscal year 1990 budget request?

Mr. **Wampler**. We have tried to mitigate this by the request for funding for eight wells. We also are entering into communitization agreements with the private sector. We will have some of this forthcoming very quickly. Again, we are going to make a decision on whether to develop, lease or just mitigate with the offsets on the side, and we'll come to Congress with whatever legislation and reprogramming that we think we need.

NPR RESEARCH POSSIBILITIES

Chairman **Byrd**. It's my understanding that the original gas protection plan for NOSR-3 was developed by the Morgantown Energy Technology Center. Is that accurate? Is that correct?

Mr. **Wampler**. We think so.

Chairman **Byrd**. Given the emphasis required on enhanced oil recovery techniques and the problem of gas migration at the naval petroleum reserve fields, has the Department considered using these fields for enhanced oil recovery and gas migration project research and demonstrations as part of the fossil research and energy development plan?

Mr. **Wampler**. We are very currently taking a look at the naval petroleum reserves and naval oil shale reserves to try to determine what research possibilities those fields have. I mentioned earlier that we are doing a small microbial project, and that's research and development.

What we are going to be trying to do is to find a way to use these fields for research and development and at the same time operate them at a profit, and I'm very encouraged that we can do that. So we are right in the middle of attempting to develop a research plan and make the decision on whether or not we can do this without getting so far in the way of production that we throw the fields into a loss situation. We think we can do that. So we are very encouraged by it.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. Well, I think you have been very well prepared and I think we have had some good testimony.

There may be some additional questions from other members of the subcommittee, and I likewise may wish to submit some additional questions. Would you please respond promptly to those questions.

Mr. **Wampler**. Certainly, Mr. Chairman.

Chairman **Byrd**. All right. I thank you and your associates, Mr. Wampler.

[A brief recess was taken.]

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Proposed Sale of Naval Petroleum Reserves 1 and 3

Question: In FY89, the Department proposed the sale of Naval Petroleum Reserves 1 and 3 and valued them at $3.5 billion. The FY90 proposal requires a cash bonus of approximately $1.0 billion, certified commitments to deliver oil for SPRO at an average rate of 50,000 barrels a day from FY90 through FY95, and a total of 10 million barrels of oil for a Defense Petroleum Inventory during FY91 and FY92.

Compare the outside interest of the FY89 proposal to the FY90 proposal. Are there more or less potential buyers under the FY90 proposal?

Answer: We have no reason to expect less interest in purchasing Naval Petroleum Reserves 1 and 3 in FY90 than in FY89. Clearly the sale of Elk Hills would be a major sale. But several billion dollars of oil field properties change hands every year. Sale for oil rather than for cash adds a new aspect to the sale, but we do not believe the oil swap feature would reduce or significantly alter the competition.

Since the Office of General Counsel has determined that the earlier $500,000 spending limitation is not applicable to current and future activities, we plan to have appropriate staff of the Department meet with your staff to discuss activities which need to be conducted. Such planning and analytical support activities may include gathering data, holding meetings with interested parties, briefing interested members and staff of Congress and states, developing detailed milestones and action plans to meet the targeted sales date, reviewing any antitrust ramifications that might be involved and other pertinent and appropriate priority activities. By carrying out these activities the Department would be fully knowledgeable to carry out divestiture if Congress agrees with our proposal.

Question: How would a potential buyer certify a commitment to fill SPR?

Answer: A potential buyer would certify his commitment to fill the SPR when he made a bid for all or part of Naval Petroleum Reserve No. 1. Winning bidder(s) would make formal commitments when they signed binding contractual sales documents, which would specify the details of the transaction.

Question: What do you mean by approximately $1.0 billion in cash?

Answer: The Department of Energy estimates that the cash bonus a buyer would pay for Elk Hills and Teapot Dome, after deducting the cost of providing oil for the SPR, would be at least $1 billion. The price could be more or less depending on the anticipated price of oil.

Question: At today's prices, the Department estimates the package to be worth about $3.1 billion. This is made up of increments of $1.0 billion in cash, $1.941 billion for the 50,000 barrels of oil a day for SPR and $169 million for the 10 million barrels of oil for the defense inventory.

Of course, a lot goes into estimating the value of this asset and I don't want to get into a guessing game on the specifics. I am curious, however, how the value apparently dropped from $3.5 billion in FY89 to $3.1 billion in FY90?

Answer: The $3.1 billion during FY 1990 is a representation of a minimum payment required of a responsible buyer(s), consisting of an offer of 109.5 million barrels of specification oil delivered to the SPR and 10 million barrels of oil for a Defense Petroleum Inventory plus $1 billion or more cash. I believe your other number of $3.5 billion represents the direct proceeds from an NPR sale estimated as obtainable by Shearson Lehman Hutton for a FY 1989 sale. Of course, an extra year's production and sale of oil at NPR-1 will have occurred, resulting in revenues of approximately $564 million. We plan to sell more than 29 million barrels of crude oil from NPR-1 and NPR-3 in FY 1989, and that is oil that a prospective buyer will never be able to recover. Hence, the value from year to year of the asset would be lower, given equal expectations (prices, reserves, etc.) on other pertinent factors.

Question: On what basis do you estimate the value of the oil produced from NPR to be $13 a barrel (pg. 182), the value of the oil to be placed in SPR if NPR is sold to be $15.56 a barrel (see backup material), and the cost to fill SPR if NPR isn't sold to be $15.81?

Answer: The $13 price for NPR oil is OMB's assumption about the national average price of crude acquired by domestic refiners in FY 1990, modified to reflect the historical difference between the national average price and prices in NPR marketing areas. The OMB assumed average price in FY 1990 is $14.29 a barrel. The modified assumptions are $13.10 a barrel for NPR-1 and $14.22 a barrel for NPR-3. The weighted average of the modified assumptions is $13.14 a barrel.

The FY 1990 budget price for SPR oil in FY 1990 is $15.57 a barrel. This price also is a modification of OMB's assumption of $14.29 a barrel and is increased by $1.28 a barrel to provide for SPR costs associated with Cargo Preference Act compliance and other SPR-specific costs.

To our knowledge, we have not indicated in the budget request or elsewhere that the per barrel cost to fill the SPR in FY 1990 increases from $15.57 to $15.81 if the NPRs are not sold. There is no connection between the $15.57 price assumption and the sale of the NPRs.

Question: Do you agree with OMB's price assumptions?

Answer: At the time the OMB oil price assumptions were provided to support the FY 1990 budget estimates, they reflected world oil market conditions as they then appeared. They did not anticipate the recent increase in world oil prices.

Question: Please provide for the record an analysis of your oil price assumptions used in FY 89 and those used in FY 90?

Answer: As discussed above, all price projections for future fiscal years are derived from price guidance issued by OMB.

Based on the history of NPR prices and Domestic Refiner Acquisition Cost (DRAC), we have statistically developed the following relationships between the NPR prices and the DRAC.

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NPR-1 crude price = (.93 X DRAC) - $0.37
NPR-3 crude price = (1.082 X DRAC) - $1.45

The resulting oil prices for FY 1989 were $12.07 for NPR-1 and $13.02 for NPR-3. These prices, while consistent with the projections for FY 1990 of $13.10 and $14.22 for NPR-1 and NPR-3 respectively, appeared to be too low based on current market prices and the prices at which oil had already been sold and contracted for in FY 1989 at both locations. Therefore, already billed deliveries and the current sales prices were extrapolated through the remainder of FY 1989 to give a more refined estimate of prices than the projection made by applying our price algorithm to the OMB FY 1989 DRAC projections.

Our modification of the FY 1989 OMB price increased the NPR-1 price by $1.17 to $13.24 and the NPR-3 price by $0.58 to $13.60. This leads to the anomaly that NPR-1 prices are falling between FY 1989 and FY 1990 and NPR-3 prices are rising during the same time frame. Both the OMB and Departmental FY 1990 price projections reflect a year-to-year oil price increase.

There are changes occurring in the California crude oil market, such as new pipeline connections to take California oil to Texas. Due to these changes, the price relationship between the DRAC and NPR-1 prices are likely to evolve. However, new trends take time to be recognizable in statistical data, and they have not yet had a significant impact on price adjustments for longer term oil price and budget projections.

As explained above, SPR prices are OMB price assumptions adjusted for SPR-specific costs not reflected in those assumptions. For FY 1989, the OMB assumption is $13.00 adjusted to $14.24. For FY 1990, the OMB assumption is $14.29 adjusted to $15.57.

Question: The FY 90 request relating to the sale of NPR assumes a SPR fill rate of 72,000 barrels a day in FY 90 and 75,000 barrels a day from FY91-95. This assumes that 50,000 barrels a day are provided for the sale of NPR and the remainder from additional appropriations including carryover balances, funds for 22,000 barrels have been requested in FY 90.

If NPR isn't sold as proposed, would the Administration support funds for the additional 50,000 barrels a day?

Answer: If the NPRs are not sold, the Administration is committed to filling the SPR at current levels and given this commitment we, along with OMB, would seek some alternative method to accomplish this within the Gramm-Rudman-Hollings fiscal constraints.

Question: The budget before us was assembled several months ago. During that time, I believe the price of oil has risen about $4.

Do all the value and price assumptions we've discussed today reflect that increase?

Answer: Oil prices have increased by over $4 a barrel since the value and price assumptions for the FY 1990 budget were adopted. Our discussions of value and price assumptions today did not reflect this increase.

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NPR Maximum Efficient Rate

Question: The Naval Petroleum Reserve Act required that the NPR be produced at their maximum efficient rate (MER). Since this budget was produced a few months ago, the request for development drilling of the reserves was based on an oil price which is essentially outdated.

The FY90 request for development drilling for Reserves 1 and 2 is $7.9 million below FY89 ($19.0 million in FY89; $11.0 million in FY90). This proposed decrease is due to drilling less wells and mix of wells (pg. 185).

At today's prices, is MER maintained in this budget?

Answer: Yes, the Reserves will continue to be produced at MER, as required by the Act. MER strategies are continually monitored and are updated semi-annually. Actual reservoir performance and the results of reservoir studies--including modeling and simulation--are continually evaluated. The determination of MER takes into account the capability of the reservoirs to produce and the strategy best suited to produce each reservoir, as well as the economics of drilling wells and constructing facilities. The FY90 budget figures were produced after consideration of the operating strategies needed to produce each reservoir at its MER, including the number and type of wells to be drilled.

Question: Do you feel you should re-evaluate Reserves 1 and 2 proposed FY90 development drilling program as a result of the oil price increase since November?

Answer: While we do not believe we need to reevaluate the FY90 development drilling program for Naval Petroleum Reserves No. 1 and 2 solely as a result of the oil price increase since November, the FY90 development drilling requirements have been and are continually reevaluated. Drilling is a vital element in a reservoir development and management strategy to achieve production at MER. Additional wells are drilled for efficient drainage, as part of an improved recovery plan, and/or as replacement to existing wells which may no longer be productive due to mechanical conditions. Ongoing planning considers both current--since November--price forecasts and current projections of reservoir performance. As a result, projections for both the mix and the timing of FY90 development wells are continually monitored and semi-annually updated.

Question: If Congress provided $19 million in FY90--the same as the FY89 level--for development drilling of Reserves 1 and 2, how would you allocate those funds between the type of wells?

Answer: We do not believe at this point in time that additional development drilling funds in FY90 could be used. NPR-1 is at a stage in its life in which the majority of its primary development is completed. A significant effort is currently underway to characterize, model, simulate, and study the reservoirs in order to determine optimal MER strategies. Resulting drilling activities from these evaluations include decreasing well spacing where warranted, supporting improved recovery operations, deepening existing wells, attempts to extend the known boundaries of reservoirs, and horizontal drilling. Therefore, although the number and mix of wells may change, the FY90 program is planned to be carried out using the $11.0 million in the FY90 request, with any additional funding provided from unused prior year appropriations, as required.

Question: Would receipts increase in FY89 or FY90 as a result of these additional funds?

Answer: If additional development drilling funds were provided and additional wells were drilled, the resulting wells would almost certainly increase production and, therefore, receipts in the near term. However, it is essential to understand the potential effect of new wells on long-term overall production performance in any reservoir. This concern is at the heart of many of the reservoir studies currently being conducted at NPR-1. Improper placement of wells in reservoirs may simply accelerate recovery, and not provide additional reserves. Therefore, it is essential for continued NPR-1 development drilling to be conducted in a logical, systematic manner so that each drilling "investment" provides optimal returns in increased efficiency and profitability. We believe the FY90 budget request reflects such an approach.

NPR Cost of Wells

Question: The FY89 justification indicates that the cost of a Stevens well is $850,000 and the cost of a Shallow Oil well is $333,000. By comparison, the FY90 cost of a Stevens well is estimated to be $1,219,000 and the cost of a Shallow Oil well is $319,000.

Is there a particular reason for the increased cost of a Stevens well?

Answer: The FY90 request indicates a higher average cost for a Stevens well than the average cost shown in the FY89 request. This is due completely to a change in the projected "mix" of drilling tasks (e.g., deepening, redrilling, testing, and drilling associated facility needs) and well types (injection vs. production, target reservoir and horizontal vs. vertical). For Stevens Zone wells, the cost shown is the average cost of new wells to be drilled and existing wells which will be deepened within the Stevens Zone. The cost of deepening an existing well is considerably less than the cost of drilling a new well. Depending on the mix of new wells and deepenings planned in any year, the resulting average cost can vary greatly from year-to-year. The $850,000 cost per Stevens well reported in the FY89 justification includes eight Stevens deepenings. In contrast, the FY90 program includes fewer deepenings and three of the more expensive horizontal wells.

NPR Receipt Estimates

Question: The FY89 justification estimates receipts for FY89 from the Reserves 1 and 2 to be $738 million. By comparison the FY90 justification estimates FY89 receipts will drop to $553 million. Part of this decrease is due to a decrease in the estimated production for FY89.

Why is estimated oil production for Reserves 1 and 2 decreasing from 109,000 barrels of oil a day to 99,000 barrels a day? Is the ability to produce diminishing or is this a reaction to old price assumptions?

Answer: The estimated decrease in FY 1990 from 109,000 barrels of oil per day to 99,000 barrels of oil per day is due to updated estimates based on reviews of current reservoir performance and the results of modeling and simulation techniques. The change in price assumptions had no effect on the estimated oil production forecasts.

SPR Oil Price Assumptions

Question: It is not surprising that the oil price assumptions used to formulate the last three budgets show a wide swing. For instance, the assumed price for FY 89 was $18.53 a barrel in the FY 88 budget, $20.75 a barrel in the FY 89 budget and $14.24 a barrel in the FY 90 budget. Of course, the price of oil is impossible to accurately predict and I am not trying to criticize your efforts.

I am curious to know, however, if you think 22,000 barrels a day can be purchased with the amount of funds you have requested in the FY 90 budget?

If not, do you intend to send the Congress a budget amendment for the additional funds?

Answer: The FY 1990 request assumes that oil purchased for the Strategic Petroleum Reserve in FY 1990 will cost an average of $15.57. That assumption was made several months ago and did not anticipate the recent increase in world oil prices. We currently are paying about $17 per barrel and if prices continue at that level or increase further, the $127 million requested in FY 1990 would not support purchases of 22,000 barrels a day.

Notwithstanding that possibility, we do not plan to amend the request. If the NPRs are not sold, the Administration is committed to filling the SPR at current levels and given this commitment we, along with OMB, would seek some alternative method to accomplish this within the Gramm-Rudman-Hollings fiscal constraints.

Question: The budget is proposing to fill the Strategic Petroleum Reserve at a rate of 72,000 barrels of oil a day. This rate will push the inventory to a total of 609 million barrels by the end of FY 90.

Of the 72,000 barrels a day, funds have been requested for 22,000 barrels and the remaining 50,000 barrels are part of the proposed sale of Navel Petroleum Reserves 1 and 2.

If the proposed sale of NPR doesn't go through, do you intend to send the Congress a budget amendment to keep the rate at 72,000 barrels a day?

Answer: We would not seek a budget amendment if the sale is not authorized.

Question: What is the maximum efficient rate of fill for the SPR in FY90 and FY91?

Answer: The physical constraint on the oil fill rate of the SPR is the rate of storage capacity development. The maximum fill rate that could be achieved under a "fill-to-capacity" approach would be 120 thousand barrels per day (b/d) in FY 1990 and 104 thousand b/d in FY 1991.

Question: The mandated fill rate for the Strategic Petroleum Reserve before NPR "shut in" is 75,000 barrels a day. The FY 90 budget request suggests that the fill rate, not including the NPR sale proposal will average 50,000 barrels a day for FY 89 and FY 90.

Will the legislation proposing the sale of NPRs 1 and 2 waive the 75,000 barrels a day requirement?

Answer: The Omnibus Budget Reconciliation Act of 1986 amended The Energy Policy and Conservation Act to restrict the sale or other disposal, other than to the Strategic Petroleum Reserve, of NPR 1 crude oil if the Strategic Petroleum Reserve is not being filled at a minimum rate of 75,000 barrels a day. In both FY 1988 and FY 1989 the appropriations language for the SPR Petroleum Account waived this restriction and the Department's proposed appropriations language for the FY 1990 request would extend the waiver to FY 1990. For years beyond FY 1990, the restriction is removed in the language of the proposed Naval Petroleum Reserves divestiture authorization legislation.

SPR Crude Oil Barter

Question: The Food Security Act (P.L. 99-198) gave DOE the authority for the barter of agricultural commodities for crude oil. In response to a question at the FY-89 hearing, you indicated that the DOE and USDA have executed a Memorandum of Understanding in 1987 outlining the procedures for barter arrangements.

In addition, USDA has made formal barter proposals to Mexico and Venezuela and has contacted Algeria, Egypt, Indonesia, Iraq and Nigeria. None have indicated any interest.

What were the responses from Mexico and Venezuela?

Answer: While both countries indicated a need to import grain, they were not interested in a barter arrangement involving crude oil. The primary reasons cited were:

- Crude oil is considered a "crash crop" and export sales are needed to earn hard currency in order to purchase the countries needs in the open markets;
- There was little tangible benefit to the crude oil exporting agencies, i.e., the national oil companies and energy ministries, since a sufficient market exists for oil export sales assurance with self-imposed oil export quotas as (Mexico) or OPEC quotas as (Venezuela); and
- Both countries were somewhat interested in potential export market expansion for heavy crude oil, however, the SPR requirements were for light crude oil.

Questions: How did USDA make its proposals? Were there specifics involved?

Answer: The proposals to Mexico and Venezuela were made through visits to those countries by a U.S. Government team composed of representatives from the USDA, Department of Energy and the local U.S. embassy. In advance of the visits, the proposals were extended by the respective U.S. embassies to the appropriate Mexican and Venezuela government officials. The proposals were somewhat general in nature, i.e., expressing the basic concept of exchanging specific agricultural commodities from the Commodity Credit Corporation for crude oil of an equivalent value meeting the SPR's quality specification, with the intent of negotiating details as to terms, timing and comparative values once the country showed interest in the concept.

Question: If you were USDA, how would you change it in order to be successful?

Answer: The Department is unable to offer any suggestions for enhancing the feasibility of a crude oil barter program. As demonstrated by the responses from Mexico and Venezuela, there appears to be overriding financial and economic policy considerations on the part of other countries which preclude any interest in carrying out an exchange.

SPR Use of Prior Year Balances

Question: Is there a particular reason why the FY89 justification did not mention any anticipated prior year balances, yet the FY89 column of the FY90 justification indicates the use of $38 million in carryover funds?

Answer: The FY 1989 budget request anticipated that all of the funds appropriated in prior years would be obligated by the end of FY 1988. However, this did not occur due primarily to the rescheduling and/or cancellation of planned FY 1988 procurements, delays in contract closeouts and claims settlements, the deferral of work from FY 1988 to FY 1989 and underruns of budgeted costs.

Question: Are there any additional prior year balances beyond what is stated in the FY90 budget?

Answer: Total unobligated balances at the end of FY 1988 were $39.7 million. As shown on page 237 of the budget request, $38.6 million of this balance is planned for use in FY 1989 and the remaining $1.1 million is applied to reduce new budget authority requirements for FY 1990.

SPR Big Hill Management

Question: The budget for management proposes a reduction from $18.2 million in FY89 to $14.2 million in FY90 (pg. 239). Reviewing the justification indicates the only reduction in activities is the elimination of Big Hill construction management.

Is the Big Hill construction project the entire reduction in the management activity?

Answer: The Management budget funds all of the costs incident to managing the SPR program at the Federal level. These costs include the salaries, benefits, and other expenses of 147 full time equivalent (FTE) Federal employees, including 27 at Headquarters and 127 at the Project Management Office and the various SPR sites; the expenses (rent, communications, utilities, etc.) of maintaining the Project Management Office; and the contract services to support the technical analyses, studies, etc., required to address program issues including SPR development criteria, oil fill decisions, drawdown readiness planning, and distribution policy decisions. The $18.2 million planned for obligation in FY 1989 include obligations that had been planned in FY 1988 but slipped to FY 1989 and obligations for work associated with the policy question of expansion of the SPR from the currently planned level of 750 million barrels to 1 billion barrels, as well as maintenance of the current level of Federal staffing and analytic support. The $14.3 million planned for obligation in FY 1990 will support Federal staffing at the FY 1989 level, the costs and expenses of the Project Management Office, and the normal requirements for analytic support for program policy and performance criteria.

Federal management of site activities, including construction, is primarily an oversight function and the completion of construction at Big Hill in FY 1989 will have no impact on costs in the Management budget in FY 1990. The level of Federal staffing at Big Hill will not change from FY 1989 to FY 1990.

SPR Security Enhancements

Question: As part of an ongoing effort, the FY 90 budget requests an increase of $2.353 million for increased site security. At last year's hearing you indicated that this effort was not to correct security problems. The effort was necessary "in light of a changing threat environment, it is considered prudent to make refinements and upgrades to the SPR security system as new concepts and technologies evolve to counter the threat."

Can you elaborate on some of the new concepts and the security enhancement program?

Answer: The SPR's enhanced security program increases protection of components which are most vulnerable and critical to its primary mission, i.e., the ability to drawdown and distribute oil at prescribed rates. The program's new security concepts include:

- Implementation of an SPR-specific threat guidance that requires addressing a high-threat terrorist potential;
- Development of a more highly trained and larger tactical protection force;
- Integration of security protection force under the Management and Operating contractor for increased effectiveness of on-site security response;
- Installation of additional physical protection, including site perimeter detection and assessment capabilities; and
- Implementation of the Master Security Agreement (MSA) concept for security planning and implementation.

Question: Have the budget requests for these security enhancements been reduced by the Department or OMB?

Answer: The budget requests for security enhancements have not been reduced by either the Department or OMB.

Question: How are planes overhead detected? Do SPR facilities have their own radar?

Answer: Planes are detected by visual observation. Protection officers are required to report all sightings, including descriptive data such as type of aircraft, estimated altitude, direction, and suspicious actions such as circling. There is no radar equipment at any SPR facility.

Question: Are any of the gates at the facilities double gates?

Answer: Facilities have single gates with drop-bars at vehicle stop-points and concrete zigzag barriers to prevent high-speed entries. The SPR also plans to install cantilever vehicle barriers at main gates to better insure access denial.

SPR Financing Alternatives

Question: A November 1988 report prepared by the Energy Futures Group analyzed several financing approaches for the Stragetic Petroleum Reserve. The report generally concluded that the best alternatives in terms of immediacy seem to be through the Federal Financing Bank or dedicating some of the NPR revenues for SPR oil.

The study argued that properly using the Federal Financing Bank would be a viable way of keeping the SPR fill off-budget.

Does that mean that there would not be an impact on outlays?

Answer: Using the Federal Financing Bank to finance SPR fill would appear to reduce DOE outlays. Whether the Federal Financing Bank would or would not be charged with outlays is not entirely clear to us. Since the borrowing is backed by the actual value of an asset, there may be a way that outlays might not be charged against the Federal Financing Bank as we understand is the case with Treasury's accounting for gold and foreign currency transactions.

Question: What does the study mean when it states that in using the FFB, "some of the collateral value of existing SPR oil might be utilized to reduce overall budget authorization"?

Answer: Presumably, it means that DOE would no longer request authority for appropriated funds to purchase oil for the SPR, since it was using existing SPR oil as collateral for FFB borrowings to purchase additional oil.

Question: What do you intend to do with this study?

Answer: The purpose of the study was to examine possible alternative methods of financing oil purchases for the Strategic Petroleum Reserve. We believe that the Energy Futures Group has done a good job with the study, and we will undoubtedly build on the study by continuing to investigate possible ways to improve financing the SPR.

Although the study did not address divestiture, the Administration has decided to pursue an alternative acquisition method through Naval Petroleum Reserve divestiture and requiring the buyer(s) to deliver SPR oil. That proposal supports two of the President's major goals: (1) meeting special obligations through the flexible freeze and (2) managing America's government better through privatization of assets better managed by the private sector.

Strategic Petroleum Reserve Expansion

Question: As part of the FY89 Appropriations bill, Congress directed the DOE to provide a report to Congress, by April 1, 1989, concerning potential sites for expansion of SPR.

What is the status of the site analysis?

Answer: The Department has completed its site identification, screening and selection process for the expansion study. The draft report is currently in Departmental review and on schedule for submission to Congress by April 1, 1989.

Question: Will the study come back rejecting expansion as an alternative?

Answer: The study, as requested by Congress, identifies potential sites, construction costs and projected schedules required to expand the SPR from 750 million barrels to one billion barrels. While the study also addresses benefits and technical considerations associated with expansion, it is not conclusive in nature.

Question: Three recent consultants reports done at the request of DOE and relating to the SPR, generally concluded that the expansion to 1 billion barrels was preferable across the combination of assumptions considered.

One report analyzed the EIA's base case oil forecast of 1987 and concluded the SPR should be expanded to 900 million barrels by the year 2000 in order to meet the 90 day U.S. import requirement.

The same report also used a more complicated probable model of oil supply disruptions, market impacts and macroeconomic losses to estimate the net benefits of alternative SPR sizes. The results indicate the SPR should be expanded to one billion barrels in the 1990s.

With this background, where do you see the DOE going with the SPR in the 1990s?

Answer: The Department continues to support SPR capacity development to a total of 750 million barrels by the end of FY 1991 and SPR oil fill to 750 million barrels by the end of 1995. Decisions have not been made regarding any further expansion of the Reserve.

Question: If SPR is to be expanded, what is the next logical step?

Answer: The next step associated with an expansion of the Reserve would be legislative enactment of appropriations associated with initiation of conceptual planning environmental assessment activities.

Question: Would additional sites be necessary?

Answer: Yes, the expansion of the Reserve to one billion barrels would likely require the development of at least one new storage site.

Question: What current sites can handle additional caverns?

Answer: There is virtually no space available for additional caverns on existing Government-owned properties (Big Hill has a potential for 1 or 2 caverns). However, expansions of 10 to 25 caverns can be accommodated within the salt domes at Big Hill, West Hackberry and Weeks Island if the Government chooses to acquire additional property at these salt domes.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

Question: Since the passage of the Energy Policy and Conservation Act (EPCA) of 1975, which established the petroleum reserves for the United States, the State of Hawaii has pursued the issue of designating a regional petroleum reserve (RPR) site of 90 days of local consumption in Hawaii. The Strategic Petroleum Reserve (SPR), which is now filled with approximately a half billion barrels of crude oil, is located in leached salt dome caverns in Texas and Louisiana.

The Mainland U.S. and Alaska are reasonably protected against an energy supply disruption. Alaska produces crude oil, and the other 48 continental states either produce oil or are served by pipelines which connect them to the SPR central storage in Texas or Louisiana.

Hawaii, on the other hand is without an indigenous fossil fuel supply. Because of its geographic uniqueness, Hawaii is defenseless against an energy supply disruption. Need I remind you that Hawaii is the location of major military installations in the Pacific Basin, such as Pearl Harbor.

The Hawaii Congressional Delegation sent a letter to Energy Secretary Watkins, asking him to review Hawaii's vulnerability to a disruption of its oil supply.

In recent years, the U.S. Department of Energy (DOE), in cooperation and communication with the State of Hawaii, advocated a diversion to Hawaii of ships at sea carrying cargoes of crude oil from the Middle East, or the use of American Flag tankers of Alaskan crude oil.

The Pacific Basin imports half of its oil from the Middle East. In the case of a disruption, especially one in the Persian Gulf, the demand for available Australian and Southeast Asian crude oils will increase dramatically. Further, statistics indicate that U.S. shipping requirements must be met by foreign tankers and the domestic tanker fleet is inadequate to meet the current disruption plan for the Pacific Basin. It is evident that the Gulf Coast nor Alaska will provide sufficient energy security for Hawaii during the 1990's.

In light of this information that I have shared with you, how does the DOE program to equitably serve the energy supply needs of Hawaii in the case of an energy supply disruption? Is this plan, sufficient to respond to such a crisis in an efficient and timely manner?

Answer: The Department of Energy achieves its goal of energy emergency preparedness through an extensive program of education, coordination, and information sharing with all 50 States and territories. Recognizing that each of the States has vastly different energy requirements, DOE has determined that the States themselves are in the best position to determine what their energy emergency plans should be, rather than dictate a single energy emergency preparedness plan for all States.

Representatives from the State of Hawaii have been involved in all aspects of DOE's State liaison program. The Department's aggressive State liaison program includes: regional seminars involving State energy emergency services, and legislative officials, plus federal and energy industry leaders; expansion of the DOE-funded electronic mail system for timely and consistent federal-state-local communication; participation of State and regional energy representatives in national and international exercises and simulations; attendance of Department officials at meetings of State, regional, and national energy organizations and public interest groups; and organization of a systematic process whereby Department of Energy personnel are able to analyze and respond to any energy emergency in real time.

Additional information on the 1988 State outreach program and the future direction for the Department's efforts, respectively, are contained in the two attached publications: Regional Differences, Common Concerns:

Federal-State-Industry Roles in Energy Emergency Preparedness by the Strom Thurmond Institute, Summer 1988; and State and Federal Roles in Energy Emergency Preparedness by the National Research Council, January 1989.

Question: Will the DOE be willing to investigate an RPR for Hawaii at this time?

Answer: The unique energy needs for the State of Hawaii are of a concern to the DOE and to the country. DOE is aware of the considerations put forward in support of RPR for Hawaii in the report, "A Review of Factors Relating to the Establishment of a Regional Petroleum Reserve in Hawaii," forwarded to the Secretary of Energy by the Congressional Delegation from Hawaii on January 31, 1989. While examining the finding contained in the Hawaiian report, the Department is in the final stages of completing a study, mandated by Congress, which will address a number of issues concerning the Strategic Petroleum Reserve (SPR), including whether regional petroleum reserves are necessary. The Department of Energy's study is scheduled to be submitted to Congress on April 1, 1989, and copes will be provided directly to the Senators and Congressmen from the State of Hawaii at that time. If, following your review of our study, you have any additional questions or concerns regarding this issue, we would be pleased to provide additional information.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

STATEMENT OF DR. DALLAS L. PECK, DIRECTOR

ACCOMPANIED BY:

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BUDGET REQUEST

Chairman BYRD. The subcommittee will come to order.

We will now review the fiscal year 1990 budget request for the U.S. Geological Survey.

Testifying in support of the request will be Dr. Dallas L. Peck, Director of the U.S. Geological Survey.

The Survey's fiscal year 1990 request is $452,465,000, an increase of $959,000 over the amount appropriated for fiscal year 1989.

Dr. Peck, we will make your full statement a part of the record. If you would introduce your associates and then summarize your statement, we will then proceed to the questions.

Dr. PECK. Thank you, Senator.

I would either summarize the statement or we could move directly to questions, whichever you prefer.

Chairman BYRD. We'll do it the way you prefer.

Dr. PECK. Well, thank you. I will then summarize briefly the written statement.

We do thank you and appreciate the opportunity to discuss our fiscal year 1990 budget. As you stated, our request is for $452,465,000, an increase of $959,000 from fiscal year 1989.

The program increases total a little over $27 million, plus $4 million in fixed costs. The program decreases total somewhat over $30 million to fund both the programmatic increases and the fixed increases.

The major increases include increases in all three divisions for global change programs. This is an increase of $7 million, which is part of a larger effort which is a high Presidential priority to investigate global change and changing climate, an effort which I play a role in as chairman of the Committee on Earth Science of the Federal Coordinating Council for Science, Engineering and Technology.

The climate change program for the Geological Survey involves all three divisions. Part of it is paleoclimate. Part of it has to do with sensitive areas like the Arctic and the desert areas in the West. Part of it looks at the hydrologic aspects, the input of water to climate models and the output from those models as far as what precipitation might be in the future. Part of it is involved in data systems development, and our facility at Sioux Falls should play a major role in land data for global change studies. Also, a part of the funds are for archiving the Landsat imagery at Sioux Falls and putting it in a permanent form of storage so that it is not lost for people to use.

In our National Mapping Division the fiscal year 1990 request is $108,146,000, an increase of somewhat over $13 million from fiscal year 1989. That includes an increase of $15.3 million for the Advanced Cartographic Systems Program which is a program to modernize our old mapping technology. It's a multiyear contractual development program that we sketched out several years ago. It involves an agreement between us and the Defense Mapping Agency to share hardware and software development so that the cost to the Geological Survey for both software and hardware is greatly reduced from what it would be if we did it on our own.

In geology our request is $171,426,000, a decrease of somewhat over $6 million from fiscal year 1989. That includes an increase of $1.7 million for our National Geologic Mapping Program, including both a Cogeomap partnership with the State's programs and a Federal mapping program.

This is in response to high priority national needs and represents a widespread acknowledgment that geological mapping is essential for many different reasons, both mineral resource development and the identification of hazards in land use planning.

GEOLOGIC LONGE-RANGE INCLINED ASDIC [GLORIA]

The Geologic Division budget also includes an increase of $1.3 million for offshore geological surveys which would support both short- and long-range objectives, a followup of the sea floor imaging studies we have done using the GLORIA system. It involves both identification of resources and sea floor processes, but also things like sonar reflectivity, the seabed and seabed engineering properties which are of considerable interest to the Navy.

I couldn't give my introduction without mentioning that the 28th International Geological Congress will be held in Washington, DC this next summer. We and the National Academy are hosts, and we expect 6,000 to 10,000 scientists from all around the world from more than 100 countries, and this is the first time in more than 50 years that the Congress has been held in the United States.

In our water resources program our request is $138,451,000, a decrease of somewhat over $8 million from fiscal year 1989. That request includes an increase of $1.7 million for toxic substances hydrology. That is a program to investigate contamination of both ground and surface water, and the increase will allow us to expand a cooperative program with the Department of Agriculture and EPA to look at the pollution from agricultural chemicals in the Midwest.

This concludes my oral remarks, and I would be pleased to respond to any questions.

[The statement follows:]

STATEMENT OF DR. DALLAS L. PECK

I appreciate this opportunity to discuss with the Subcommittee the Fiscal Year (FY) 1990 budget proposed for the U.S. Geological Survey (USGS). This funding request is for our 111th year as the Nation's principal earth-science agency.

The mission of the USGS is to conduct research and resource appraisals, and to collect, analyze, and disseminate geologic, hydrologic, cartographic, and geographic data which support earth science investigations and provide related information to the public. Our FY 1990 budget request to carry out this mission is $452,465,000, an increase of $959,000 over the appropriated amount for FY 1989. Within the total request, programmatic increases totaling $27,440,000 are proposed, while an additional $4,333,000 is included for adjustments to base. Programmatic reductions of $30,814,000 are proposed to fund both high priority program increases and fixed cost increases. The USGS will continue to support the earth-science information needs of the Nation to ensure that we fulfill its highest priority earth-science needs.

Through science we have developed an increased insight of how the Earth and its global environment functions. Much still remains to be understood; however, about the evolving earth system and how human activities may influence life on our planet. As a result, the Committee on Earth Sciences, that I chair for the Office of Science and Technology Policy, has developed a strategy to expand research activities in all areas of global change. The FY 1990 budget for the entire Government makes global change a Presidential priority and proposes total funding of $191.5 million for a cooperative effort among 7 Federal agencies. The Department is also in the process of reviewing all of its programs to determine which activities support efforts to address the effect of climate change on the Nation's natural resources. The USGS support of the Presidential initiative is an integrated approach, which builds upon the basic capabilities of the Survey's major scientific disciplines: geology, hydrology, cartography, and geography.

The FY 1990 request of the USGS includes an increase of $7,000,000 for expanded research on global change. This research in FY 1990 will focus on monitoring and understanding variations in the earth's environment and its relationship to global climate change; defining the rates, trends, and magnitudes of past climate variation and their causes and consequences; studying the relationship and sensitivity of the hydrologic cycle to climate and its contribution to general circulation models; investigating the interaction of human activities and natural processes by monitoring land-use and land-cover; and estimating future change and environmental responses to such change. In addition, this initiative will provide for the development of the framework for storing, cataloging, exchanging, and integrating the large amount of data required to answer climate change questions.

The Landsat Commercialization Act of 1984 authorized responsibility to the Secretary of Commerce for a national archive of remote sensing data. Since 1972, Landsat data has been received, processed and distributed at the USGS's Earth Resources Observation System (EROS) Data Center in Sioux Falls, South Dakota with funds provided to the Data Center on a reimbursable basis from the National Oceanic and Atmospheric Administration (NOAA). In addition, the Department of the Interior (DOI) currently maintains archives at the EROS Data Center of aerial photography, digital cartographic data, and other Earth science data that are important for monitoring and assessing land resources as well as long-term global environmental observation and study. It has now been determined that a different approach is needed to support the operation of the archive and to assure the availability of the data for intergovernmental global change requirements. We believe the most practical solution is to directly authorize and fund the archive within DOI. As part of this effort, the Administration, in Section 110 of the General Provisions for the Department of the Interior, has proposed legislation to transfer the authority for the Landsat data archive and related activities from the Secretary of Commerce to the Secretary of the Interior. The FY 1990 Budget includes an increase in funding at the $2.0 million level to operate the archive. An increase of $1.0 million is also included to begin development of a land data and information management system at the USGS in support of the global change initiative.

National Mapping Program

The USGS is requesting $108,146,000 for the National Mapping Program (NMP) to provide a diversity of maps, digital cartographic data, remotely sensed data, and other geographic products and services. The FY 1990 requested funding level is a net increase of $13,911,000 from the FY 1989 appropriated amount. A new budget structure for the NMP is presented in the FY 1990 Budget, reflecting changes in programs and technology that have occurred over the last decade. In response to changing national requirements, mapping modernization will result in more comprehensive map revision, development of a digital cartographic data base, and automated product generation.

We are requesting an increase of $15,300,000 to continue development and implementation of Advanced Cartographic Systems (ACS), initiated in 1986 to expand and enhance map revision capabilities, at lower unit production costs. In this effort, we use state-of-the-art mapping technologies being developed with the Defense Mapping Agency (DMA). To facilitate these jointly planned modernization programs, Memoranda of Understanding have been developed to: permit the USGS to use DMA source materials, procure hardware and software systems of mutual interest under development by DMA, and integrate USGS staff into the DMA modernization process to facilitate these joint activities.

The National Mapping Program is responding to a technological revolution in the use of map data. Federal and State agencies are improving and streamlining decisionmaking by using computers as an extension of the thinking process to analyze large quantities of digital spatial data. Digital cartographic data, which form a framework for these analyses, also can be stored, edited, and retrieved for map revision more efficiently using ACS than with current mapping technology. Significant benefits will be realized as the USGS implements its current strategy of developing a production capacity to support an average 10-year map revision cycle. Beneficiaries include a wide variety of Federal, State and local government users.

A cooperative project was undertaken by the USGS and the Bureau of the Census in FY 1984 to develop a 1:100,000-scale data base. The hydrography and transportation information portions were completed in December of 1988, and will be used with the 1990 Decennial Census. This project is particularly noteworthy because it resulted in the first national digital data base at the 1:100,000-scale. The utility of the data among other Federal agencies is growing and users now include the Federal Highway Administration, the Federal Emergency Management Agency, the Nuclear Regulatory Commission, the Department of Defense, the Bureau of Land Management (BLM), and the Bonneville Power Administration.

To continue to meet other Federal agency requirements, the USGS has entered into an agreement with the BLM and the U.S. Forest Service for cooperative activities to eliminate duplication of effort and to coordinate certain specific digital cartographic data collection activities for base category, public land survey system, and other data which potentially may be shared between agencies. At the beginning of FY 1989, the National Mapping Program had completed primary coverage for 33 States and extended national coverage to approximately 97 percent. It is anticipated that 4 additional States will be completed in FY 1989 with the remaining States in FY 1990. In addition, we continue to add data to the 1:24,000-scale digital cartographic data base in an attempt to meet growing user needs.

In addition to producing and disseminating cartographic and geographic data, the Survey has been designated as the lead agency to develop Federal cartographic data standards. To prevent duplication of effort and insure that such data can be used by the entire user community, common National standards and exchange formats are essential. The Federal Interagency Coordinating Committee on Digital Cartography, the National Committee for Digital Cartographic Data Standards, and the Digital Cartographic Data Standards Task Force have joined together to propose such a standard under the leadership of the USGS. During FY 1989, public comment and the results of widespread Federal testing will be evaluated and final standards will be proposed to the committees.

The traditional USGS missions of earth-science data-collection, research, and information dissemination continue to be enhanced through the advancement of geographic information systems (GIS) technology. A GIS is a computer hardware and software system designed to collect, manage, analyze, and display spatially referenced data. Throughout the bureau, GIS technology is used to more efficiently carry out hydrologic, geologic, geochemical, and geophysical research. We are working with other Department of the Interior bureaus and Federal and State agencies on many cooperative GIS projects. A recent symposium in San Antonio, Texas, was attended by approximately 3,000 participants, attesting to the burgeoning number of users and the diversity of applications of GIS technology. GIS activities are being facilitated through cost-effective consolidation of specialized equipment into interdisciplinary, regional GIS facilities, located at the USGS National Center in Reston, Virginia, and at field locations in Denver, Colorado, and Menlo Park, California.

Geologic and Mineral Resource Surveys and Mapping

The USGS conducts basic geological research and provides information on mineral and energy resources, both onshore and offshore, and on geologic hazards. These activities continue to provide knowledge and information that improves our understanding of the components, structures, and processes of the Earth, leading to more informed decisions on the uses of our Nation's natural resources. The FY 1990 funding request for these activities is $171,426,000, a decrease of $6,773,000 from the FY 1989 appropriated level.

FY 1990 will be the third year of operation for the National Geologic Mapping Program. The program was inaugurated in response to the mounting concern, including reports by the National Academy of Sciences (NAS), that relatively few geologic maps are available to address many geologically-based issues. State interest in the cooperative component of the program is high, and we are currently working with 33 States. The FY 1990 budget proposes an increase of $1,718,000 for this program, $250,000 for Federal/State Cooperative Geologic Mapping (COGEOMAP) and $1,468,000 for Federal Geologic Mapping. This increase will provide for 4 to 5 additional cooperative projects with States including one or two State geophysical maps. In the Federal Geologic Mapping component, the increase will allow production of additional primary geologic maps and companion special-purpose maps.

The Geologic Long-Range Inclined Asdic (GLORIA) imaging sonar surveys of the ocean floor in the Exclusive Economic Zone (EEZ) are providing valuable geologic information. Verification studies of the Pacific EEZ off the Conterminous U.S. are underway in FY 1989 to determine the geologic framework of the continental margin. The proposed increase in FY 1990 of $1,315,000 for Offshore Geologic Surveys would allow for expanding verification or "ground truth" surveys of the EEZ off the Atlantic coast, the Gulf States, Puerto Rico, and the American Virgin Islands. These on-site verification surveys are the next step for qualifying and quantifying prospective resources.

In the Earthquake Hazards Reduction Program, we continue to monitor high earthquake probability areas in Central and Southern California. Specifically, work is proceeding in the Parkfield earthquake prediction experiment, conducted in an area where the Survey has forecast a high potential for a magnitude 6 earthquake within 5 years of 1988. In addition, seismic and geodetic monitoring of earthquake prone regions will continue in Nevada, Utah, Washington, and Alaska. In 1987, the Nuclear Regulatory Commission began the five year process of transferring the responsibility for earthquake monitoring in the eastern United States by providing funds for the joint development of the eastern states component of a National Seismic Network which will provide data for earthquake research. This cooperative work will continue in FY 1990.

An objective of the National Mineral Resource Assessment Program is to provide mineral resources information for planning the use of public lands. Current efforts are concentrated on mineral surveys of those BLM lands for which a preliminary determination of wilderness suitability has been made. Mandated by the Federal Land Policy and Management Act of 1976, and carried out in coordination with the Bureau of Mines and BLM, mineral surveys are being conducted on over 400 areas comprising over 13 million acres. USGS surveys of 11.1 million acres will be completed by the end of FY 1989, and surveys of 3.4 million acres are in progress. BLM expects to provide the Secretary of the Interior in 1990 the minerals information needed to present his recommendations to the President by October 1991. Following completion of these surveys, we expect to accelerate our efforts in assessing the mineral resource potential of 2 degree quadrangles in the conterminous United States and Alaska and continue assessment activities for the U.S. Forest Service and BLM in support of their land planning processes. An interagency agreement between the U.S. Forest Service, the USGS, and the Bureau of Mines establishes a policy for coordinating this work. To date, such surveys have been completed for the National Forests in Challis, Idaho; San Isabel, Colorado; and Black Hills, South Dakota. Surveys are underway in the White River, Colorado and Tongass and Chugach Forests in Alaska.

As part of the USGS's outreach program, the 5th V.E. McKelvey Forum on Energy and Mineral Resources, attended by over 1,000 people with an estimated 80 percent of the participants from the private sector, has just been completed in Reno, Nevada. The Forum's theme of mutually cooperative research was enthusiastically received and stimulated much interest in further cooperative activities. In particular, the geophysical workshop attended by approximately 300 people demonstrated the utility of geophysics in locating concealed mineral deposits. Participants at the Forum strongly supported geologic mapping and the need to expand the level of effort carried out by the USGS.

Under the Coal Investigations Program, many projects are being conducted in cooperation with various States. The projects include preparing statewide or county coal-resource reports, improving States' abilities to manage their coal-resource data bases, and assessing coal-resource availability. To date, two coal-availability studies have been completed in Kentucky, one in West Virginia, and one in Virginia. In FY 1989, two additional studies, one in Kentucky and one in West Virginia will be completed. Results from these studies are providing evidence that there is much less coal available for development than previously estimated. One coal-availability study is planned in FY 1990. The information from these studies will be made available to land planners for use in State and local resource assessments and decision processes. Entry of data into the National Coal Resource Data System will continue through cost sharing agreements with 22 State geological surveys.

The Oil and Gas Investigations Program will continue to provide insights into oil and gas habitat, generation, migration, and entrapment. In May 1988, a joint USGS/MMS working paper (Open File 88-373) on the Undiscovered Recoverable Oil and Gas Resources of the Nation was distributed for peer review to evaluate various aspects of the assessment. The Department specifically asked the Association of American State Geologists (AASG) and the NAS to provide a formal review of the working papers. The AASG review, recently completed, focused on the geologic information used in the assessment. The NAS will review the methodology and make recommendations for the future orientation of such assessments; the NAS report is due by April 1, 1990. The review of the geologic information by the AASG has been conducted through a series of four regional workshops in Denver, New Orleans, Los Angeles, and Anchorage. A final report was submitted January 3, 1989. The AASG provided a critique of our assessment process, and made suggestions that should improve future assessments.

Investigations are underway to determine if there is a hydrologic connection between the Corwin Springs Known Geothermal Resource Area (KGRA) and thermal features in Yellowstone National Park. The results will be presented in a report to Congress by December 1, 1990. In addition, the Geothermal Investigations program continues geologic study of the Crater Lake volcanic system and geochemical study of the waters of Crater Lake. The activities at Crater Lake under P.L. 100-443, the Geothermal Steam Act Amendments of 1988, will include working with the National Park Service to evaluate reports by Oregon State University and other relevant information.

In the Coastal Erosion program, we will discontinue studies at the end of FY 1989. All field studies on the barrier islands of Louisiana will be completed in FY 1989, while the southern Lake Michigan and the Louisiana wetlands studies are in their second and first year of intensive study, respectively. Data resulting from all studies will be provided to land planners for their use in resolving coastal erosion problems associated with climatically induced fluctuations in sea and lake levels. Moreover, a research study plan for the Alabama and Mississippi coast will be prepared and submitted to Congress in the spring of 1989. We are also continuing our coordination with NOAA in the preparation of a plan for mapping in the Great Lakes as required under P.L. 100-220.

In July 1989, the 28th International Geological Congress will be held in Washington, D.C. with more than 6,000 scientists from about 100 countries anticipated to attend. This session, co-hosted by the USGS and the NAS, will mark the first time in more than 50 years that this meeting has been held in the United States. Much of the program will emphasize multidisciplinary approaches to research reflecting the increasing awareness that many earth-science problems will only be solved by using the combined expertise of many disciplines.

Water Resources Investigations

The USGS Water Resources Program involves the operation of nationwide water-data collection networks, and the conduct of surveys, investigations, and research on the status of the Nation's surface and ground water resources. The FY 1990 funding request for these activities is $138,451,000, a programmatic decrease of $8,536,000 from the FY 1989 appropriated amount,. The FY 1990 Budget proposes increases of $1,677,000 in the Toxic Substances Hydrology Program and $2,000,000 in Climate Change Hydrology totaling $3,677,000 and decreases in all other programs, including the Federal-State Cooperative Program and the Water Resources Institutes and Research Grants Programs, totaling $12,213,000.

As noted earlier, the USGS proposes to begin a multidisciplinary program of research related to global change -- within our Water Resources Program this initiative would involve the start of a new program in Climate Change Hydrology to be funded in FY 1990 at $2,000,000. In addition, an increase of $1,677,000 is proposed in the Toxic Substances Hydrology Program to support an additional point-source study focusing on either ground-water contamination in a fractured rock setting or gasoline contamination of ground-water. The requested increase will also enable significant expansion of an ongoing regional study of non-point source contamination within the soybean and corn-growing region of the upper Midwest. This study is designed to improve knowledge on the movement and fate of agricultural chemicals with respect to water quality. This information will help provide the general scientific basis for developing agricultural management guidelines needed to protect the quality of water resources. The USGS has coordinated plans for this activity with the U.S. Department of Agriculture and with the U.S. Environmental Protection Agency. Activities associated with this major regional study will provide opportunities for collaborative research among the agencies.

Another key element of our work in water resources is the pilot National Water-Quality Assessment (NAWQA) Program which involves testing methodologies and determining the feasibility of a full-scale national water-quality assessment effort. In FY 1990, $7.1 million is requested to fund the final year of field activities in the seven NAWQA pilot projects. Reviews of the pilot program, by the National Academy of Sciences and others, are expected to be completed in the spring of 1990, enabling a decision on proceeding to a full-scale program.

We continue to orient our water resources programs towards areas of emerging concern. For example, the demand for more and better information with respect to water quality issues is growing at all levels of government. Over the past decade, through our Federal, Federal-State Cooperative and Grant Programs, the USGS has been giving highest priority to efforts which respond to this demand for information. Institutionally, we have made major strides since 1980 to communicate the findings of our research and investigations more swiftly and effectively to users. Evidence of success in this area is seen in sizable improvements in the annual number (+65%) and timeliness of reports from a workforce, in our Water Resources Program, that is currently about the same size as it was in 1980. In this regard, we are proud of the National Water Summary Report series, an effort which was started in 1984. Last fall we released the fourth edition of this popular publication which provided descriptions of ground-water quality conditions on a State-by-State basis. Later this year we are planning to release the next edition of the National Water Summary which will address water use.

Over half of the funds appropriated to the USGS Water Resources programs are directed to water quality oriented programs versus less than one-third in 1980. In addition, the USGS provides significant assistance to other Federal Agencies in major reimbursable programs addressing water quality issues: the Department of Energy and Nuclear Waste Disposal, the Department of Defense and the clean-up of toxic waste problems on military installations, the Department of the

Interior and studies related to irrigation drainage. We expect that this emphasis on water quality will continue through the next decade in all aspects of our Water Resources Program.

Administrative Support

In FY 1987, the Survey was designated by the Department of the Interior (DOI) as the lead bureau for the acquisition and implementation of a single departmental administrative accounting and payment system. At the beginning of FY 1989, the USGS and the Bureau of Reclamation became operational on the Federal Financial System (FFS). Four additional bureaus began implementation efforts in FY 1989 and are scheduled to become operational at the start of FY 1990. The remaining DOI bureaus and offices will begin implementation in FY 1990 with operational start up in FY 1991.

Modernization of computing technology has been pursued to meet the scientific and administrative needs of the USGS. A new mainframe computer has been installed in the Reston Service Center to support the requirements of the scientific missions as well as FFS. Negotiations have been completed to obtain supercomputing services to meet the demands for numeric intensive computing especially the modeling of earth science processes.

In summary, that concludes my prepared remarks. I would be pleased to answer any questions you or other members might have about our programs.

BIOGRAPHY OF JOHN N. FISCHER

John N. Fischer is the Acting Associate Director of the U.S. Geological Survey (USGS). Dr. Fischer joined the USGS as a field hydrologist in Miami, Florida, in 1976. He worked there until 1980 describing the hydrogeologic characteristics of South Florida aquifers and determining the impact of salt water intrusion and landfills on ground water quality.

Since that time, he has held a succession of positions in the Water Resources Division and Directorate of the USGS, including Staff Assistant to the Director, Program Coordinator in the Office of Nuclear Waste Hydrology, Deputy Chief of the Office of National Water Summary and Long-Range Planning, Assistant Chief Hydrologist for Program Coordination and Technical Support, and Associate Chief Hydrologist.

Dr. Fischer received the Department of the Interior Meritorious Service Award in 1987. He was educated at the U.S. Naval Academy (1963), Michigan State University (1973), and the University of Arizona (1976).

BIOGRAPHY OF EUGENE H. ROSEBOOM, JR.

Eugene H. Roseboom joined the U.S. Geological Survey (USGS) in 1959 as a geologist/geochemist doing experimental synthesis of ore and rock-forming minerals aimed at understanding the origins of natural occurrences of the same minerals. He also contributed to the theoretical development of such data and its application to geologic problems. Since 1978, he has been involved in the management of the USGS activities related to the disposal of high-level nuclear waste and the coordination of these activities with the Department of Energy.

Dr. Roseboom received Bachelor's and Master's degrees in Geology from Ohio State University (1949 and 1951), a Ph.D. from Harvard University (1958), and was a post-doctoral fellow for three years at the Carnegie Institution of Washington's Geophysical Laboratory.

About half of his career has been spent on administrative assignments in the Geological Survey. These include Assistant Chief Geologist for the Eastern Region, Geologic Division Coordinator for Nuclear Waste Programs, and Chief of the Office of Regional Geology. He received the Meritorious Service award of the Department of Interior in 1983. He is currently acting Assistant Director for Engineering Geology for a period of approximately 15 months. In this position, he advises the Director on the Geological Survey's work for DOE at the proposed site for a High-Level Nuclear Waste repository at Yucca Mountain, Nevada, and has overview responsibly for the Quality Assurance Program.

Chairman BYRD. Thank you, Dr. Peck.

As I indicated in my initial comments, your fiscal year 1990 budget request totals $452,465,000, an increase of $959,000 over fiscal year 1989.

This request reflects the Reagan budget, does it not?

Dr. PECK. Yes, Mr. Chairman, but also from what I can see from this point in time, it also represents President Bush's budget. I don't anticipate any changes, but those decisions are basically made by OMB and the Department of the Interior.

Mr. Itteilag, who is here from the Department could possibly speak to that.

Chairman BYRD. I would be happy to have him do that.

Mr. ITTEILAG. Mr. Chairman, we are not sometimes entirely sure that we know everything that is going on, but as far as I know there will be no changes to the Geological Survey's budget as a consequence of the actions proposed by President Bush.

As I'm sure you've heard, the funding for the Geological Survey is in this large group of discretionary, domestic discretionary programs, which is subject to the negotiation process that has been going on between the Director of OMB and the congressional Leadership.

Chairman BYRD. There has not been any negotiation process. There is no negotiating process going on at the moment. It's too early. We haven't had the blanks filled in either. I mean the administration has not filled in the blanks for us.

OMB Director Darman sent a memorandum to the heads of all Departments and Agencies on February 16, 1989. Have you seen that memorandum?

Dr. PECK. Yes.

Mr. ITTEILAG. Yes; I have, Mr. Chairman.

Chairman BYRD. What effect will the guidance contained in the Darman memo have on your programs?

Mr. ITTEILAG. It will have no effect on the programs for the Geological Survey.

Chairman BYRD. Why would it have no effect?

Mr. ITTEILAG. Mr. Chairman, the way that this has been interpreted is that not counting the budget amendment for land acquisition affecting other Bureaus of the Department, there are no further changes contemplated to the budget. Furthermore, when we inquired as to what actions might be possible pursuant to Mr. Darman's memorandum, we were told that if we wanted to make further adjustments that they would have to be made within the totals of the budget proposed by former President Reagan, again setting aside for a moment the land acquisition amount, which is clearly an addition.

So we have discussed that guidance within the Department and there is no basis for making further changes at this time. In other words, if we were to increase certain programs, we would have to offset those increases by decreases elsewhere on what is known as an equivalent outlay basis. In other words, the outlays would have to match.

While I suspect that there are some things we would like to increase, there are no things that the Secretary or the other leadership in the Department would like to decrease. So if we have to live within the totals of the Reagan budget plus the money for land acquisition, we are going to maintain the status quo.

LEVEL FUNDING

Chairman BYRD. What will happen to your Survey's programs if funding were frozen at the fiscal year 1989 enacted level?

Dr. PECK. Well, our proposed fiscal year 1990 budget is very close to our fiscal year 1989 enacted level. It's less than $1 million over it. So if it were frozen at the 1989 level, that would represent a cut of somewhat over $900,000 which we would have to handle somewhere.

Chairman BYRD. But which does not take into consideration the inflationary factor.

Dr. PECK. Well, that's right. Actually inherent in our proposed budget are substantial increases in costs due to pay raises, due to increased retirement costs and due to rents.

Chairman BYRD. Given that the Geological Survey was referenced in the "Building A Better America" document, it doesn't appear to be getting any of the dollars. How do you reconcile the language in the memorandum, which indicates that the programs presented in the book would not be subjected to a freeze, while others, the so-called residual category would?

Dr. PECK. Well, a number of the programs that we carry out, and one program that I recall was particularly mentioned was the water quality program as part of a Federal Governmentwide initiative in water quality that included increases in some other agency programs. I mentioned that we did have an increase in our toxic waste ground water contamination aimed at agricultural pollution in the Midwest. So we are mentioned because we are an important player in that activity, but the mention did not carry with it increased funds.

Chairman BYRD. The Darman memorandum states that the Reagan budget proposals for items within the residual category are to be treated as if they were the Bush administration proposals, and you're doing that, are you? You are treating the Reagan figures as though they were the Bush?

Mr. ITTEILAG. That is correct, Mr. Chairman, yes.

Chairman BYRD. Does that Reagan figure include the $1 million increase that you referred to a moment ago?

Dr. PECK. As far as I know, the Reagan and the Bush budget for the Geological Survey are the same.

Chairman BYRD. Well, does the Reagan budget itself contemplate the $1 million increase?

Dr. PECK. Yes.

Chairman BYRD. You are not contemplating a budget amendment by the Bush administration that increases the Reagan budget by $1 million?

Dr. PECK. No.

Mr. ITTEILAG. No, Mr. Chairman, we are not.

Chairman **Byrd**. So the Reagan level, the Reagan fiscal year 1990 request is $1 million above the fiscal year 1989 level?

Dr. **Peck**. Yes.

Chairman **Byrd**. What would your inflationary factor amount to dollar-wise in the fiscal year 1989 level?

Dr. **Peck**. I had better turn to Mr. Bermel, who is in charge of my Program Office. I remember it was about $12 million.

Mr. **Bermel**. $10.5 million.

Chairman **Byrd**. Is this Mr. Bermel?

Dr. **Peck**. This is Mr. Bermel.

Chairman **Byrd**. So the inflation factor in the 1989 level——

Dr. **Peck**. That's the 1990 level. Now in the 1989 level there are also inflation factors which we are absorbing, including pay raises, and I don't know what that amounts to.

Mr. **Bermel**. It's three-fourths of the year in pay raise.

Mr. **Saunders**. The figure for fiscal year 1989, if I may, Mr. Chairman, is $10.5 million. That is the absorption for increased pay and retirement costs in fiscal 1989. The comparable number for fiscal year 1990 is an additional $4.3 million, for a total of $14.8 million.

Chairman **Byrd**. Would you identify yourself for the record.

Dr. **Peck**. This is Mr. Saunders.

Mr. **Saunders**. I am Ted Saunders, the Budget Officer for the Geological Survey.

Chairman **Byrd**. Do you anticipate that your fiscal year 1989 level would be subject to the freeze?

Dr. **Peck**. Not that I know of, Senator.

Chairman **Byrd**. As you know, most everything other than defense would be subject to the flexible freeze, which would mean that while defense would get the inflation, most of the other budgets would not.

Dr. **Peck**. Yes.

INFLATION FACTOR

Chairman **Byrd**. So then if you had to go with the 1989 figure, and considering the fact that inflation is what, 4 percent or what?

Mr. **Itteilag**. About 3.8 percent is what is predicted for fiscal year 1990, Mr. Chairman.

Chairman **Byrd**. So you would end up really with a 3.8-percent cut.

Dr. **Peck**. Yes.

Chairman **Byrd**. And what would that 3.8-percent cut amount to?

Dr. **Peck**. Well, of course, our present budget is not increased to cover the inflation matter. So we are already absorbing that cut, and that is being absorbed in most of the programs we carry out.

Chairman **Byrd**. That's what I'm trying to get at. You are asking for $1 million more. The Reagan budget is asking for $1 million more I believe you said than the 1989 level.

Dr. **Peck**. Yes.

Chairman **Byrd**. So you have a 3.8-percent inflation factor and a 1989 level. If it's frozen, what would that amount to?

Mr. ITTEILAG. That would amount to about $18 million, Mr. Chairman.

Chairman BYRD. About $18 million.

Mr. ITTEILAG. Just purely on a statistical basis it's $18 million.

Chairman BYRD. And the Reagan budget request is $1 million over the 1989 level, which would leave you still on the statistical basis $17 million under last year.

Dr. PECK. Yes.

COAL AVAILABILITY STUDIES

Chairman BYRD. Last year this committee added $1 million to your budget to continue coal availability studies in the Central Appalachian low-sulfur coal region of Kentucky, Virginia, and West Virginia. Your fiscal year 1990 budget proposes deleting this $1 million and reducing the number of studies from 3 to 1. The justification for the decrease, and I quote from page 192 of your budget is "* * * in order to continue other high priority research within available funding."

What other high-priority research are you talking about there?

Dr. PECK. Well, we are requesting a decrease in funds for our geologic programs of nearly $7 million from a total of close to $180 million. That means that many of the programs, the high-priority programs that we think are good investment in the future have had to be reduced. But we still are requesting funds to carry out $170 million in programs that include a substantial coal resources program, that include a number of mineral resource programs, geologic mapping programs and geologic hazards programs aimed at landslides and earthquakes.

Chairman BYRD. Those will be reduced or those are the priority programs?

Dr. PECK. Most of those will be reduced some, but there are still appreciable programs that will be continued.

Chairman BYRD. Well, I want to get at the question here which I have referred to and I have used the quote on page 192 of your budget.

COOPERATIVE GEOLOGIC MAPPING [COGEOMAP]

Dr. PECK. In our proposed budget for fiscal year 1990 we are requesting increased funds for two programs, two geologic programs. So there are two programs for which we are requesting increases. One is the Geologic Mapping Program, and that includes partly what we call a Cogeomap. It's jointly funded with State geological surveys, including West Virginia, and funds for us to carry out a Federal mapping program. So that is one requested increase. Another requested increase is for marine geological studies, and these are studies of the seabed and followup of these various studies. Those are the only two programs, two geologic programs for which we are requesting increases. For most other programs in geology we are requesting decreases.

Chairman BYRD. Then are you referring to those two programs in the phraseology here that I have picked out: "* * * in order to continue other high-priority research within available funding."

Within available funding what are the other high-priority research projects?

Dr. PECK. Really, I have to regard all the programs we carry out are high priority, Senator, and some are of a higher priority than others.

Chairman BYRD. But with the exception of the coal availability study.

Dr. PECK. The regular coal program, which is particularly aimed at building up data on the chemistry of coal, is a high-priority program and will be continued. We are not cutting out the whole coal program.

We have a large mineral resource program in part aimed at mineral resources within proposed wilderness lands.

Chairman BYRD. We're talking about the studies though, coal availability studies. That's really what we're talking about.

Dr. PECK. Well, it's unfortunate that we were not in a position to ask for continuation of those funds. In part, we are looking at a timing issue. Our request to OMB for funds for fiscal year 1990 was already at OMB by the time our appropriations were passed. So that was a factor, and the fact that we have a constrained budget is also a factor. I think they are very good studies.

COAL STUDY RESULTS

Chairman BYRD. I understand that five studies have been completed so far. Have the studies improved our understanding of the coal resources of this region?

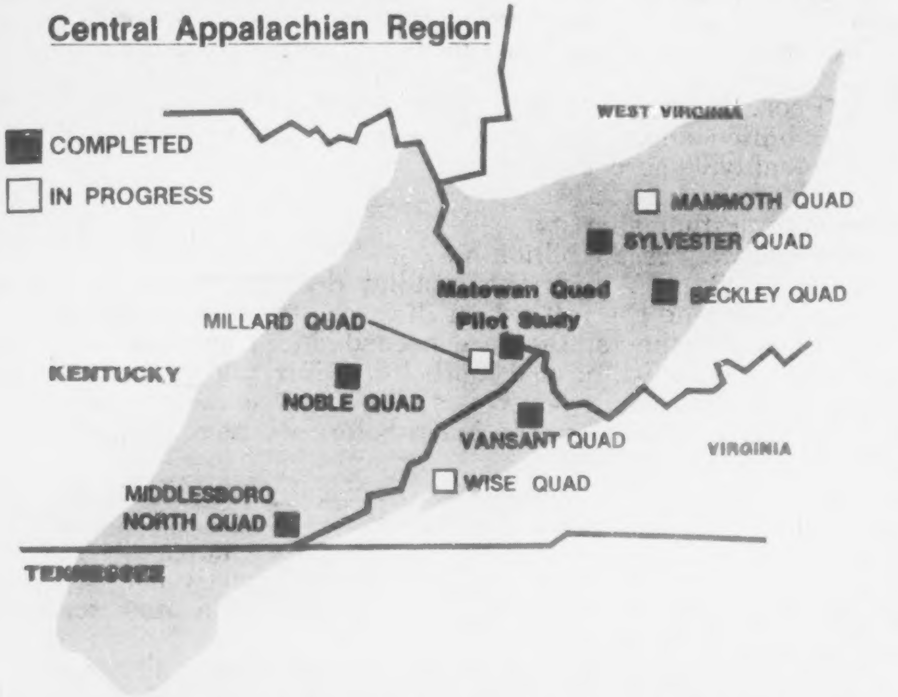
Dr. PECK. Yes, indeed, and they are aimed at—we've got a chart there that shows where the quadrangles are, and they are in the three-State region of Kentucky, West Virginia, and Virginia.

The studies are aimed at determining actually what is the geologic resource, the coal resource that is available for mining. That's considerably less than the estimated resource because some of it constitutes beds that are too close together to mine them all. Some of it is under alluvial valley floors or some of it has already been mined out. So the end result is that only about 60 percent of it is still available for mining in the six quadrangles that we have studied so far.

We think if we do a total of about 20 quadrangles in the central Appalachian basin, we will be able to make an estimate for the whole basin of what is available. I think that's very important as far as planning in the long run both as a nation and for the region.

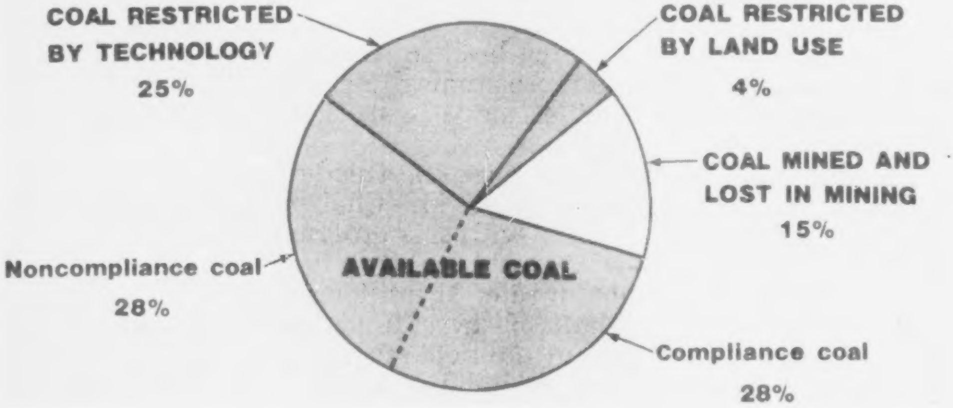
[The chart follows:]

COAL AVAILABILITY STUDY AREAS


Central Appalachian Region
■ COMPLETED
☐ IN PROGRESS
WEST VIRGINIA
☐ MAMMOTH QUAD
■ SYLVESTER QUAD
Matewan Quad
Pilot Study
■ BECKLEY QUAD
MILLARD QUAD
KENTUCKY
NOBLE QUAD
VANSANT QUAD
VIRGINIA
☐ WISE QUAD
MIDDLESBORO
NORTH QUAD
TENNESSEE

FY 1987-1988 STUDY RESULTS

ORIGINAL COAL IN 6 QUADS = 4.6 BILLION SHORT TONS



Chairman **Byrd**. You used the figure of 60 percent. Would you tell me what that is again.

Dr. **Peck**. Well, that's the coal that is available for mining once you have subtracted the coal that is not available because there are beds that are too close together or there are channel cutouts.

Chairman **Byrd**. What does that 60 percent represent in terms of tons?

Dr. **Peck**. There I will have to turn to the Chief Geologist. Well, it's 4.6 billion short tons that's original coal and we're talking about roughly 60 percent of it.

Dr. **Morgan**. About 2½.

Dr. **Peck**. Billion short tons?

Dr. **Morgan**. Yes, 2.5 billion.

Chairman **Byrd**. Are further studies needed beyond fiscal year 1989 to determine the full extent of low-sulfur coal in this region?

Dr. **Peck**. Further studies are needed, Mr. Chairman, to determine the availability of coal, both low-sulfur coal and noncompliance coal in the region, yes. We estimate that some 20 quadrangles will need to be studied in the basin before we have a good handle on the availability of coal.

Chairman **Byrd**. Then why does the fiscal year 1990 budget propose deleting the $1 million the committee added?

Dr. **Peck**. Well, as I mentioned earlier, Mr. Chairman, partly it stems from the very constrained budget and partly it stems from the timing of congressional additions versus when our fiscal year 1990 budget is submitted.

We do, however, plan to continue one coal availability study out of our existing coal program in order to keep the coal availability program moving forward.

Chairman **Byrd**. What one is that?

Dr. **Peck**. The war quadrangle in West Virginia.

Chairman **Byrd**. Which quadrangle?

Dr. **Peck**. War, w-a-r.

Chairman **Byrd**. What additional studies are required, and what would be the optimum funding level in fiscal year 1990 and in subsequent years to complete those studies?

Dr. **Peck**. Well, for this let me turn to the Chief Geologist, Dr. Benjamin Morgan.

Dr. **Morgan**. We have been pursuing this program at the rate of about three quadrangles per year, Mr. Chairman. So that will be the rate that we will continue with this program funding.

Chairman **Byrd**. And the cost would be for three quadrangles?

Dr. **Morgan**. About one-third of $1 million for each.

Dr. **Peck**. About one-half of those funds are expended by the State surveys in carrying out the field studies.

Chairman **Byrd**. So one availability study would be continued, the one you referred to, the war quadrangle?

Dr. **Peck**. Yes.

Chairman **Byrd**. Now what other West Virginia studies would be eliminated by the reduced funding?

Dr. **Peck**. I don't think any will, but I had better check with the Chief Geologist.

Dr. **Morgan**. Not to our knowledge.

Chairman **Byrd**. What about the studies being conducted in the Crumpler quadrangle?

Dr. **Morgan**. I don't have any information on that, Senator.

Dr. **Peck**. Is this another sort of high-priority quadrangle that we will do in the future?

Dr. **Morgan**. It wasn't on our list.

Chairman **Byrd**. When you say it wasn't on your list, what do you mean?

Dr. **Morgan**. The quadrangles that we have completed or projects that are proposed.

Chairman **Byrd**. Have studies been in process in the Crumpler quad? That's an area that includes parts of McDowell, Mercer, and Wyoming Counties in West Virginia.

Dr. **Peck**. I don't think studies have been carried out in the past, and I don't think studies are being carried out right now. I do believe that that is one of the quadrangles that is being considered of the 20 quadrangles in the central part of the Appalachian basin, and it would be high on the priority list for starting as soon as we can start some additional quadrangles.

Chairman **Byrd**. What other quadrangles are potentially a target for West Virginia?

Dr. **Peck**. I think I had better, if I may, Senator, I would like to supply that for the record.

Chairman **Byrd**. All right.

[The information follows:]

West Virginia Coal Availability Studies

Coal availability studies have been completed for the Beckley and Sylvester quadrangles and are underway in the Mommoth quadrangle, which will be completed in fiscal year 1989. In fiscal year 1990, current plans call for a coal availability study of the War quadrangle in McDowell County. The Crumpler, Man, Quinwood, and Webster Springs quadrangles have been targeted in West Virginia for future study, however, the selection of specific quadrangles may be altered as studies progress and results are defined.

LOW-SULFUR COAL

Chairman **Byrd**. I believe that the identification of low-sulfur coal resources continues to be a high priority, both for West Virginia and for the Nation, and I am a little more than surprised that the Survey would delete these funds from the budget for the second year in a row.

I don't address these remarks to you personally, but the fact that the studies were not continued in your budget seems to me just one more example of the previous administration's knee-jerk reaction to reject out-of-hand all congressional add-ons, regardless of their merit.

I don't ask you to comment on that.

Dr. **Peck**. I would like to comment though, Senator, if I could.

Chairman **Byrd**. Please.

Dr. **Peck**. And that is that my perception of the budget process this year was that a good deal more attention was given to congressional add-ons certainly at the Department level. We had a number of meetings. Some of those considerations did not end up in requested increases or restorations, but quite a bit of thought was given to congressional priorities.

We are, unfortunately, dealing with a rather constrained budget. So as a result, many of the congressional adds did not end up in the next year.

Chairman BYRD. Where was the $1 million deleted, at the Department level, or at the OMB level or at what level?

Dr. PECK. It was deleted I think at the Geological Survey level.

Chairman BYRD. At your own level.

Dr. PECK. Yes.

Chairman BYRD. How would you feel about the Congress restoring that $1 million and could it be effectively utilized?

Dr. PECK. Naturally I'm here, Mr. Chairman, to defend the President's budget, but if the funds were restored for that program, they would be utilized as they have for the last 2 years to carry out these studies which I think are very desirable studies.

Chairman BYRD. They could be effectively utilized?

Dr. PECK. Yes.

WEST VIRGINIA FLOODS

Chairman BYRD. As you know, West Virginia communities along the Tug Fork River and the South Branch of the Potomac have experienced some of the worst flooding on record in recent years. I understand that the Geological Survey is cooperating with the U.S. Weather Service and the U.S. Army Corps of Engineers to develop streamflow and precipitation monitoring networks in the Tug Fork Valley.

What is the status of your work in the Tug Fork Valley?

Dr. PECK. I think the monitoring network is well in place, but at this stage, Mr. Chairman, I would like to reintroduce Mr. Phil Cohen, who is the Chief Hydrologist, and we are blessed with the presence of our District Chief, the head of our Water Resources Division in West Virginia, Mr. Appel, who is sitting down there with the red tie.

Chairman BYRD. Fine.

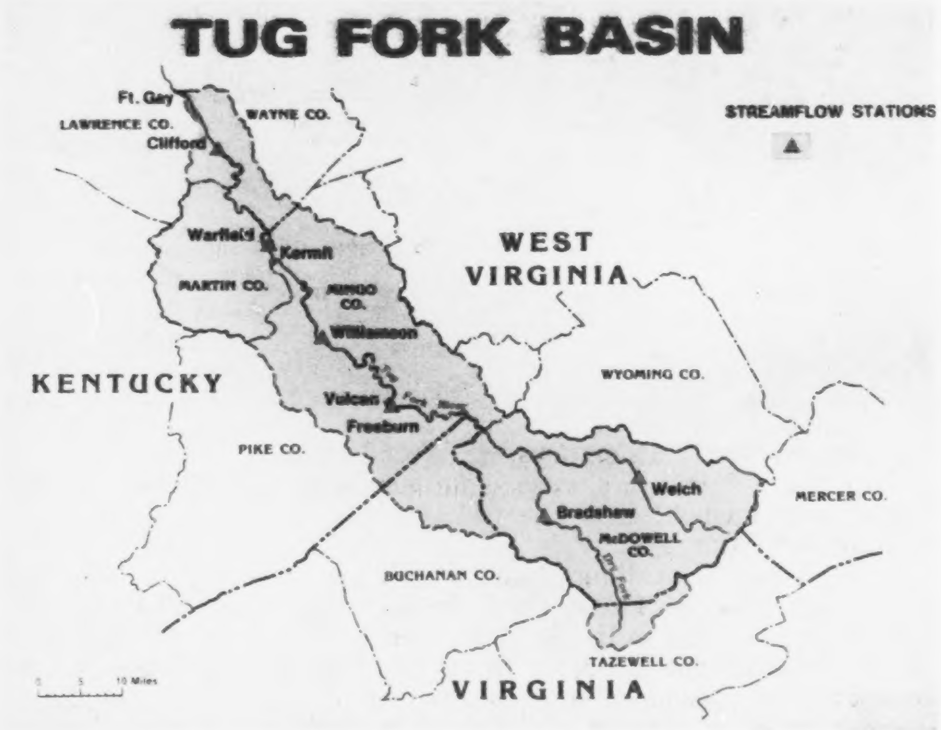
Dr. PECK. So we have a lot of knowledge here today, Mr. Chairman.

Chairman BYRD. All right.

Dr. PECK. So would one of you like to summarize where we stand?

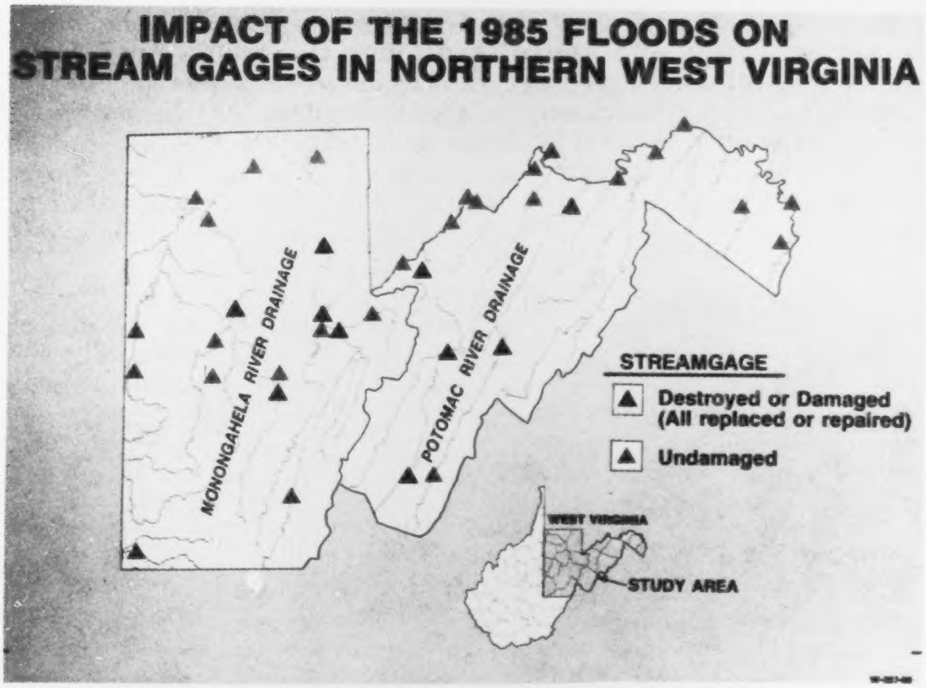
Mr. COHEN. Mr. Chairman, almost immediately after the flood in 1984 we worked with the National Weather Service and the Corps of Engineers to upgrade the network in the Tug Fork. The Geological Survey's role in the Tug Fork is to operate the stream gauging networks which are shown on this particular briefing board. Three new gauges were installed after the flood at Welch, Bradshaw, and Vulcan and, in addition, the gauge at Kermit was moved so as to coincide more closely with the data collection activities of the National Weather Service.

In addition, not shown on this board, is another very major component of the flood warning system, and that is the network of precipitation gauges that are operated by the National Weather Service. There are some 40 gauges in the basin, and during a precipitation event the records from the stream gauging stations that we operate and records from the precipitation monitoring gauges operated by the National Weather Services are sent by telemetry to Charleston. Our preliminary analyses are done in Charleston and other analyses are done in Cincinnati using techniques that the National Weather Service has developed to predict floods. So the network has been upgraded, is in place and is operational at the present time.


TUG FORK BASIN
Ft. Gay
LAWRENCE CO.
WAYNE CO.
Clifford
STREAMFLOW STATIONS
▲
Warfield
Kermit
WEST VIRGINIA
MARTIN CO.
MINGO CO.
Williamson
KENTUCKY
WYOMING CO.
Vulcan
Freeburn
PIKE CO.
Welch
MERCER CO.
Bradshaw
McDOWELL CO.
Dry Fork
BUCHANAN CO.
TAZEWELL CO.
VIRGINIA
0 5 10 Miles

Chairman BYRD. Are you persuaded that there are a sufficient number of streamflow and precipitation monitors in place to ensure adequate notice to residents in future flood emergencies?

Mr. COHEN. I believe so, Mr. Chairman. This second board shows the situation again with regard to stream gauging stations in northern West Virginia. This is the area where you will recall we have very disastrous floods.



IMPACT OF THE 1985 FLOODS ON STREAM GAGES IN NORTHERN WEST VIRGINIA

MONONGAHELA RIVER DRAINAGE
POTOMAC RIVER DRAINAGE
STREAMGAGE
Destroyed or Damaged (All replaced or repaired)
Undamaged
WEST VIRGINIA
STUDY AREA

Chairman Byrd. In northeastern West Virginia.

Mr. Cohen. Yes; there were some very disastrous floods in 1985 with very extensive loss of life.

Chairman Byrd. Yes.

Mr. Cohen. The stations shown in red are stations that were destroyed as a result of that flood. In addition, other critical structures were destroyed relating to measuring streamflow. Within several weeks after the flood, we installed temporary facilities to continue to make measurements. In a period of about 6 months thereafter all gauging stations had been fully replaced and, in addition, the National Weather Service upgraded its precipitation monitoring network so that it is now very analogous to the network that I described in the Tug Fork.

There are some operational differences. These data are transmitted directly into Washington where the analyses are made in near real time and flood warnings are issued by the National Weather Service almost immediately.

In direct response to your question, these are very detailed and extensive networks certainly from the standpoint of stream gauging, the area that we have expertise in, and from the standpoint of monitoring precipitation.

I am an interested scientist, and this seems like a very intense and certainly, from my knowledge, state-of-the-art technology that the National Weather Service is using.

Chairman Byrd. So you think then that there is a sufficient number of gauges and monitors to ensure adequate notice to residents in future flood emergencies.

Mr. Cohen. Yes, sir.

Chairman Byrd. There were nine streamflow gauges damaged or destroyed during that 1985 flood. Have those gauges, do I understand you to say that they have all been repaired or replaced?

Mr. Cohen. Yes, Senator, they have all been replaced.

Chairman Byrd. And you are satisfied that those gauges in place on the South Branch of the Potomac River will provide sufficient warning to nearby residents in the case of a flood?

Mr. Cohen. Yes; I believe so.

STATE WATER RESEARCH INSTITUTES

Chairman Byrd. Once again this year the budget proposes to reduce funding for each of the 54 State Water Research Institutes from $105,000 to $52,000. This total decrease is $2,875,000. The Congress rejected this very same proposal last year.

Your budget on page 299 doesn't even attempt to justify this decrease other than to indicate that funding would be reduced from $105,000 to $52,000 per Institute. What rationale can you offer for this reduction?

Dr. Peck. Well, again, Senator, it reflects our very tight budget and the need to make very difficult priority decisions.

Chairman Byrd. We are hemmed in at every turn by the very tight budget, and we are getting that not only from you but from every other witness who is representing a Federal agency or department that comes before this committee.

I suppose that history will show that the Laffer curve and supply side economics really, really got this country into terrible difficulty. So that we are having extremely difficult problems now and will apparently for years to come in meeting the needs of the people, their health needs, their welfare needs, their education needs, their infrastructure needs and the national security needs of the country. We just bump into this at every turn.

I remember a story written by Edgar Allen Poe about an individual being in an enclosure where the walls were constantly coming closer and closer and closer. I think that's the way I feel and others probably feel the same on this committee, that the walls, these budget walls are coming closer and closer and closer. So that our Federal dollars are becoming increasingly limited while the needs of a growing population are growing.

Now I understand that students receive advance training through the Institute program. What are the academic disciplines involved in this training?

Dr. Peck. The Water Resources Research Institutes are very broad. They are not just hydrology. They are representing the sort of thing we do, but they get into the economics of water and water use and the human implications of water use and water management. They are very broad and they are very important in this Nation as we are concerned about water quality, and if we get another drought, why we'll be certainly concerned about water quantity, too.

It's important to have well-trained professionals, and the Institutes over the last 20 years have played a very major role in that.

Chairman Byrd. So it's important to the Nation to have well-trained scientists in these professions, isn't it?

Dr. **Peck**. Yes, it is.

Chairman **Byrd**. I'm told that the Institute at West Virginia University trains at least seven students per year. Do you have a national total of students participating in the program?

Dr. **Peck**. Well, let me turn to the Chief Hydrologist.

Mr. **Cohen**. There are approximately 500 students per year, Mr. Chairman.

Chairman **Byrd**. About 500.

Mr. **Cohen**. Yes, sir.

WATER INSTITUTES RESEARCH

Chairman **Byrd**. I also understand that the West Virginia Institute conducts research on emergency spill waste and retaining structures for dams and reservoirs during flood situations, on water quality, including acid mine drainage and agricultural runoff, and on the contamination of rural ground water supplies. These activities would be cut in half if we were to approve the budget proposal before us.

These research projects are addressing serious problems in West Virginia, and I assume that the Institutes in other States are addressing equally important issues.

.It is my understanding that States required to match the Federal contribution on a 2-to-1 basis. Do you not feel, Dr. Peck, that this program is an economical way for the Nation to address water quality issues?

Dr. **Peck**. Yes, I do. I think it's a very important program. It is, incidentally, a program that is up for reauthorization this year. The administration has not yet reviewed the issue and made a decision on the bill. Certainly the Institute Directors would prefer to go back to a 1-to-1 match, which is what it was before the last year or so.

Chairman **Byrd**. Would you date that formula, please?

Dr. **Peck**. The 1-to-1 match—was it last year, Mr. Cohen, or the year before?

Mr. **Cohen**. The first year of reauthorization was 1985. The bill read, Mr. Chairman, that for the first year it would be 1 to 1, then 1½ to 1 and then, finally, the last year in the authorization, which was fiscal year 1989, it was two State dollars for every one Federal dollar, and it's now being considered for reauthorization for fiscal year 1990.

Chairman **Byrd**. President Bush in his "Building A Better America" document under enhancing water quality discussed the growing concern throughout the country regarding ground water and surface water contamination.

Did you have an opportunity to propose that the Institute's funding be restored as part of the Bush budget revisions?

Dr. **Peck**. We discussed that at the Department level, Mr. Chairman, but it was not proposed to OMB.

Chairman **Byrd**. So you had made the restoration decision at the Department level?

Dr. **Peck**. Well, let's see. I know we discussed it. Did we formally propose it, Mr. Cohen, or did we just discuss it?

Mr. **Cohen**. This may not be precisely the question the chairman asked, but I think the fiscal year 1990 Geological Survey's budget recommended restoration or the maintenance of a congressional add-on in fiscal year 1989.

Chairman **Byrd**. So the reduction took place beyond the Departmental level.

Mr. **Cohen**. Beyond the Geological Survey level, Mr. Chairman.

Chairman **Byrd**. Yes; that's what I meant to say, beyond the Survey level. At OMB level?

Dr. **Peck**. At the Department level I think, Mr. Chairman.

Chairman **Byrd**. Well, I believe that the program represents a good investment in our Nation's water quality and I intend to do what I can to see that the Water Research Institutes are funded at least at last year's level, and I also intend to do what I can to see that the money is restored for the coal availability studies. It seems to me that is good money well spent.

LANDSAT SATELLITE FUNDING

Now I noted in the newspaper of today, March 6, the headline, "Satellites to go Dark for Lack of Funds." That's an article dealing with the future of the two Landsat satellites. The Washington Post article states:

> At midnight on March 31 the lights will go out in two Landsat satellites ending 17 years of continuous recording of the Earth's land that generated a stream of 38,000 images a month.

The images transmitted by the Landsat satellites are critical not only to the work of the Geological Survey, but also to the intelligence gathering activities of the Department of Defense and other activities associated with the work of the Department of Agriculture, NASA, and the National Oceanic and Atmospheric Administration.

In view of the fact that we have arrived at this point primarily because the Reagan administration's privatization efforts failed, could you indicate what plans the Bush administration may have for keeping these satellites operational?

Dr. **Peck**. Yes; I would be pleased to, Senator. I attended a meeting at the Old Executive Office Building between 10 and 11 this morning to discuss this very issue, and I had to leave that meeting early in order to be here on time.

At that meeting, which was called by OMB and was Chaired by Ms. Janet Hale of OMB, with representatives from the Defense Department, NOAA, NASA, the Department of the Interior, the Department of Agriculture, the CIA and other agencies, we discussed what possible alternatives there were.

We did not completely resolve the issue, but when I left at 11 it looked very hopeful that we would be able to put together some sort of a short-term funding package to carry us well past March 31, and at the same time there would be a relook at the whole issue of commercialization and the relationship both for Landsat 4 and 5 and future Landsats and Landsat 6 and 7 between the Federal Government and EOSAT.

So hopefully we are on our way to resolving the problem, and almost assuredly we will not have to turn those satellites off on March 31.

Chairman **Byrd**. Well, from the standpoint of resolving the issue, what is involved money-wise?

Dr. **Peck**. Well, the costs for one-half year are about $9.5 million, and NOAA was funded at that level to defray operating expenses for the first 6 months of fiscal 1989 through March 31, and it would take roughly that amount for the rest of the year. What we are looking at is an attempt to put together a package of funds, including perhaps contributions from EOSAT to defray the costs for the 6 months, and at the same time to look at the long-term issue and to examine the problem of funding or not funding Landsat operations in fiscal 1990.

Chairman **Byrd**. Do you anticipate that there will be an amendment sent up or a reprogramming request or some such?

Dr. **Peck**. I would say the likelihood of a reprogramming request is far greater than an amendment request.

Chairman **Byrd**. What impact would the shutdown of these satellites have on the day-to-day operations of the Geological Survey?

Dr. **Peck**. Well, it would have two impacts. One is an impact on our EROS Data Center in Sioux Falls, SD. What we have done since 1972 has been as a processor of the imagery and preparation of the images for sale. We do that for NOAA and for EOSAT at the present time, that is, if you order imagery from EOSAT, actually we are the one who prepares those images.

So if Landsat 4 and 5 operations cease, we will no longer be handling the imagery from Landsat 4 and 5 for commercial sale, and that represents an effort of some 15 people for the whole year and a budget of about $1.9 million for the year. So that is one impact.

Another impact is the scientific impact, and that is that we have a number of programs that utilize Landsat 4 and 5 imagery. Many of the studies we carry out using Landsat imagery are of things that don't move, like rocks, and we can use older Landsat imagery if it's available. But some of the imagery is used for changing environmental matters, glaciers that move back and forth, or changing patterns of vegetation. We have used it certainly in the past to monitor the use of irrigation water from the pattern of vegetation evident on the imagery, and of course the Department of Agriculture uses it extensively for examining crop yields in the Soviet Union and other foreign countries. In fact, they are by far the largest user of the imagery.

The sales of the imagery are about $8 million a year, of which $4 million are for private industry, particularly the petroleum companies, and the rest is through Federal agencies, particularly the Department of Agriculture, the Department of Defense, CIA and NASA.

SATELLITE USE IN GLOBAL WARMING INITIATIVE

Chairman **Byrd**. What impact would the shutdown of these satellites have on the administration's global warming initiatives?

Dr. **Peck**. Well, it would be detrimental, Mr. Chairman. Here is this little brochure that accompanied the President's budget that summarizes the global climate change program, and on its cover is a satellite image of the Earth, and the back of it has a satellite imagery that reflects the vegetation. If we are indeed going to be able to detect what is changing and also the processes that are involved in the change, we need satellite imagery and the Landsat imagery is a very important element of that.

Now what would be the effect of a shutdown for 2 years, I don't know. One thing is it might jeopardize the chances of future Landsat satellites, like Landsat 6 and 7 because a shutdown might discourage other uses, particularly foreign users of the data.

Chairman **Byrd**. I missed something there. You referred to a shutdown for 2 years.

Dr. **Peck**. If indeed a shutdown should take place of Landsat 4 and 5, there is a 2-year hiatus until Landsat 6 is launched. The planned launch is 1991. I think a shutdown like that would be a disincentive for domestic and foreign users of the data. They would turn to other data sources, Spot imagery. The Soviets are advertising their imagery, and there are other traditional sources like aerial photos.

Chairman **Byrd**. Is that the kind of shutdown that this article is talking about?

Dr. **Peck**. Yes; it is. But as I said, judging from the meeting we had this morning, I think the chances are good that that will not occur.

LANDSAT REPROGRAMMING

Chairman **Byrd**. Now if this is done by reprogramming, only the Geological Survey has the reprogramming authority as I understand it.

Dr. **Peck**. Actually back in fiscal year 1983, I think it was, following the Landsat Commercialization Act the Geological Survey transferred to NOAA our direct funding of something over $2 million a year and authority to retain receipts for the sale of imagery. The total of those direct funds and the receipts totalled somewhat over $5 million. So we don't have authorization to retain funds. In fact, nobody but NOAA does, and thereby hangs a bit of a problem. If the OMB can work out a cost-share arrangement of the major Federal agencies to defray expenses over the next 6 months, they also have to work out in conjunction with the Congress the mechanism for doing that, and that's not terribly straightforward.

Chairman **Byrd**. What activities in the Geological Survey would be candidates for absorbing part or all of the $9.4 million in the reprogramming?

Dr. **Peck**. Well, we would resist very stoutly being a major player in that reprogramming. We utilize ourselves only 6 percent of the imagery. Agriculture is using 40 percent, and the Defense Department uses over 20 percent; 6 percent of the cost is appreciably less than $1 million and therefore I have made no decision on what we might take it out of. One possibility is out of the funds that come to our Mapping Division that goes for the program in Sioux Falls. Another would be to distribute that across the users of the data, which would also include the Geologic Division.

Chairman **Byrd**. When do you anticipate a resolution of this? As I understand, we only have 25 days.

Dr. **Peck**. The resolution is not in my hands. So I can't really state with any assurance, but I think it will be resolved this week.

Chairman **Byrd**. When did this first come to light that we are going to go into the dark?

Dr. **Peck**. Well, we heard I think it was in January, wasn't it, Lowell?

Mr. **Starr**. Yes.

Dr. **Peck**. We had rumors from moles over in NOAA and around the community, and then received a letter in early February from Mr. Pike, who is the Assistant Administrator of NOAA for Satellites, who wrote and said the funds were running out March 31, could we please contribute, and we wrote and said that was a terrible thing to have to do and we didn't have the funds.

Anyhow, I'm with you, Senator, and I hope that we can resolve this and keep those satellites operating. In many ways it would be a terrible mistake I think to shut them off.

Chairman **Byrd**. Why couldn't this have been anticipated?

Dr. **Peck**. The problem is that Landsat 4 and 5 have exceeded their design life by some years. So it's like we have an old car going and it's a model A and it worked all right last year, but you're not dead sure it's going to work through the next year. So you tend to fund it a month at a time or keep it going a month at a time because you're not sure how long it's going to last. So it was that kind of rationale that led to them supporting it for appropriations for just 6 months rather than 1 year.

FOREIGN SATELLITES

Chairman **Byrd**. Did I hear you suggest that without Landsat we could use Soviet systems?

Dr. **Peck**. Well, there are other satellite imagery available and each one has some advantages and disadvantages. The main alternative is the Spot, Spot Image, the satellite launched by the French. That has an advantage in that it has somewhat better resolution. It's a resolution 10 meters panchromatic as I remember and 20 meters multispectral, and our's is 60/80 meters, something like that, but it does not have thematic mapper sensors. So those are very useful sensors that detect in the infrared portion of the spectrum, in the thermal infrared and in the near thermal infrared. It's very useful in mineral exploration and also monitoring vegetation, the infestation of bores and this sort of thing in trees. So you would miss that completely.

Now recently the Soviets through their NASA, their Soyuzkarta have been advertising the availability of imagery. They have now got a U.S. representative. We have not purchased any of the imagery. I think there are discussions going on among the concerned Federal agencies about whether to purchase. We have been given some of the imagery and we have looked at it. It's not available over very broad areas. It's in strips that cover areas that if you were a Soviet you would be interested in having imagery over the United States.

Chairman **Byrd**. The Soviets wouldn't be a very good source for intelligence gathering.

Dr. **Peck**. I wouldn't think so.

GLOBAL CHANGE PROGRAM

Chairman **Byrd**. There is a growing public concern about the potential alteration of the Earth's climate. As chairman of the Earth Science Committee, would you tell us what role science will play in helping us to determine what actions to take with respect to global change.

Dr. **Peck**. Yes; thank you, Mr. Chairman. I think it's very important for us to find out exactly what's going on as far as a possible future climate change because the costs of mitigating a possible change are very high. We don't really understand the global climate system. It's a very complex system because it involves interaction of the Earth, the biosphere plants and the trees and that sort of thing, the oceans and the currents in the oceans as well as the atmosphere, and even a variation in the solar climate as a possible cause of climate change.

So in spite of some of the statements that were made during the heat of the summer last year, I really believe we do not know whether the climate is changing or not.

We do know, that the abundance of CO_2 and methane in the atmosphere has gone up rather dramatically since the start of the industrial revolution and that the general behavior of CO_2 and methane in the atmosphere is to capture the heat radiated from the Earth's surface, the so-called greenhouse effect. It's more complex than that because it may also cause more abundant clouds and the clouds decrease the impact of radiation from the Sun.

So what we have been doing this last year is to get all the agencies working together among themselves and with OMB to lay out what a program of study should be, and that program would involve both monitoring, research on the processes involved and then better predictive models of what will happen in the future.

We've got all the agencies to work together and we have got programs laid out in this document, "Our Changing Planet, A U.S. Strategy For Global Change Research," and there is a crosscut table that shows what all the different agencies are doing.

The Reagan administration proposed and the Bush administration is proposing a substantial increase in effort spread across all the major agencies involved, and many are involved. The larger players are NASA from a satellite viewpoint, NOAA because of its responsibilities in oceans and atmospheres, the Department of Energy because of its responsibilities in energy and, hence, in the CO_2 cycle, and the EPA is involved because of the environmental concerns. The Geological Survey is involved, as I mentioned earlier, in all three of our Divisions. For many years we have been looking at paleoclimate, natural variability as an ancient climate change. The Department of State is involved as far as negotiating treaties internationally, and this has a very strong international component because you need to monitor worldwide and you need to utilize the best minds of scientists worldwide, and if indeed mitigating strategies are needed, you need the participation of all the nations.

So it is really a very important international program as well as a national program.

At the present time I don't think we really know whether the climate is changing and, if it is changing, what is causing the climate to change. I hope in a very few years we will be able to determine it.

CARBON CYCLE AND GLOBAL CHANGE

Chairman BYRD. I'm concerned about the extent to which greenhouse gases, especially carbon dioxide, may contribute to global warming. Would you describe for us very briefly the carbon cycle and the fate of carbon dioxide as it enters the atmosphere.

Dr. PECK. Yes; we have a nifty chart here, Mr. Chairman. It's a very complex issue, but let me kind of walk you through it a little bit.

Part of the problem is that carbon dioxide is present in the Earth's crust and it's probably in the core of the Earth, in the soils and biota and the surface of the Earth and in the Earth's oceans and in the atmosphere, and there is a natural flux between plants and the atmosphere. Plants accumulate carbon of course and then when they die and rot some of that carbon passes as carbon dioxide into the atmosphere.

At the same time there is quite a flux between the atmosphere and the oceans. Particularly in the deep oceans there is many times more carbon dioxide than there is in the atmosphere. You will notice 36,000, those are gigatons, some very large number, gigatons in the deep ocean versus only 748 in the atmosphere. So much of the CO_2 is grown in the oceans.

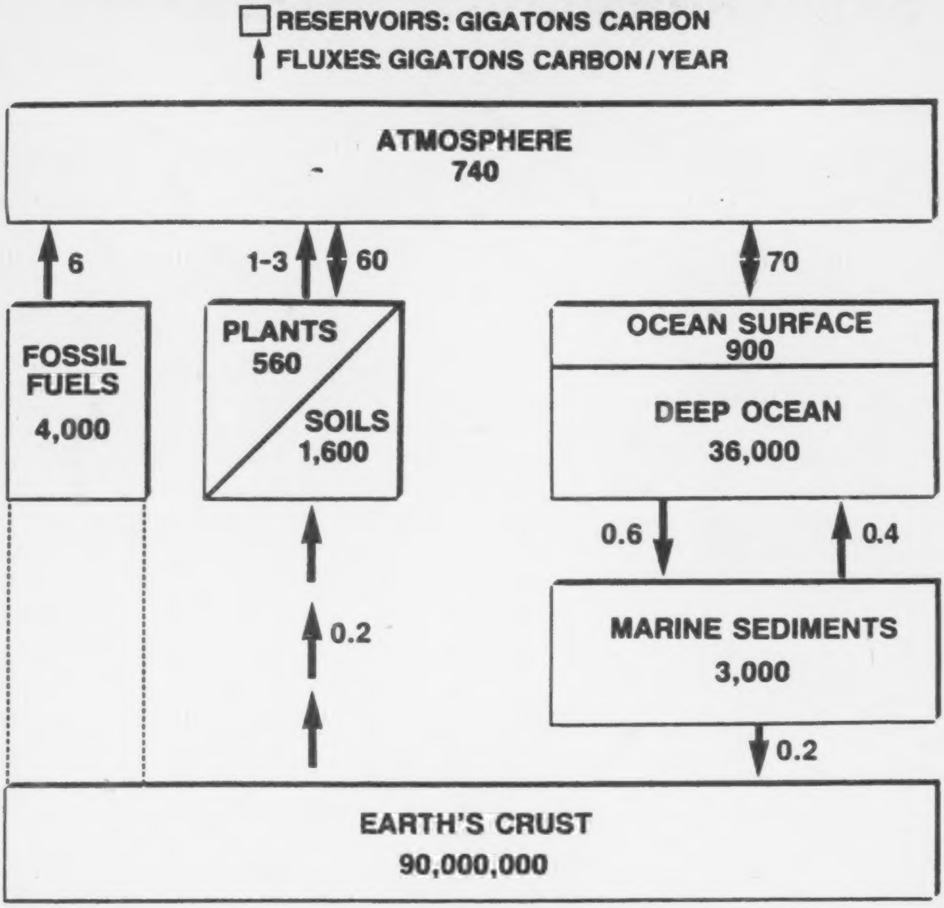
Then, in addition, some of that CO_2 is lost from the ocean as carbonate precipitates forming sediments like limestones in the bottom of the ocean. So every year there is some loss of CO_2 in the sediments in the bottom.

The fluxes between the oceans and the plants and the atmosphere are very large, 60 gigatons from the plants and something like 70 gigatons from the oceans into and out of the atmosphere.

The addition from burning fossil fuels is a very small percentage of that, perhaps 10 percent. As you can see, we estimate an annual flux of 6 gigatons a year from the burning of fossil fuels into the atmosphere, and then perhaps 1 to 3 gigatons from changing land use practices, like the harvesting and burning of the tropical forests in Brazil. So that represents only 5 or 10 percent of the total flux.

Nevertheless, it would appear that over the last several hundred years the abundance of CO_2 in the atmosphere has increased substantially.

THE GLOBAL CARBON CYCLE

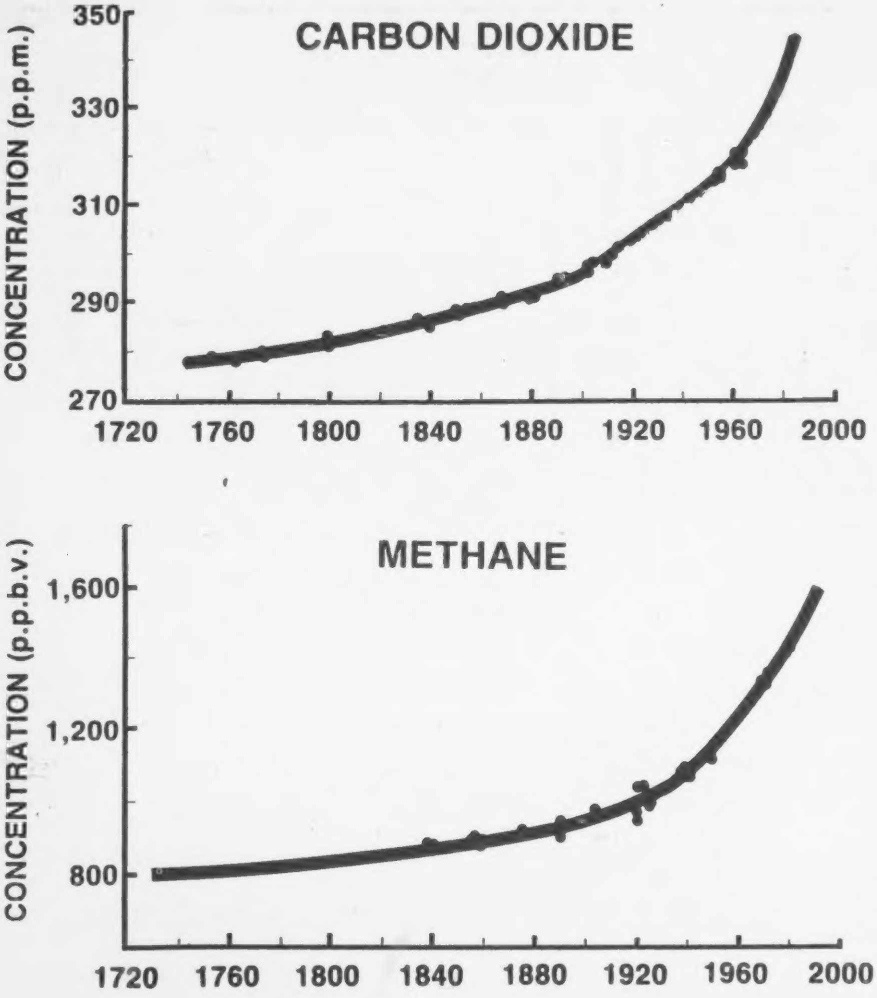

RESERVOIRS: GIGATONS CARBON
FLUXES: GIGATONS CARBON/YEAR
ATMOSPHERE
740
6
1-3
60
70
FOSSIL FUELS
4,000
PLANTS
560
SOILS
1,600
OCEAN SURFACE
900
DEEP OCEAN
36,000
0.6
0.4
0.2
MARINE SEDIMENTS
3,000
0.2
EARTH'S CRUST
90,000,000

This chart, for example, shows a change in greenhouse gases, particularly carbon dioxide and methane since 1720. In the last few years they have documented it beautifully in Mauna Loa and several other observatories around the world, and in the earlier times it's preserved in gases in ice and in the tombs of the pharaohs, and that's pretty well documented.

But you can see that we had an increase of a little over 272 to somewhat less than 350, certainly a 25- or 30-percent increase over the last 150 years. Methane has essentially doubled over the same period, and we really don't understand that. Some of that may be due to burning fossil fuels, but some of it may be a natural occurrence, the melting of permafrost in the Arctic or changing land use practices, more rice growing and this sort of thing.

So these changes in atmosphere are pretty well documented. The problem is what does it mean as far as climate now and in the future. Our global climate models are still pretty rudimentary. There are four major models and they tend to agree that there will be warming in the century, but they could be wrong, too.

ATMOSPHERIC CHANGES IN GREENHOUSE GASES (1720-1980)



Chairman BYRD. And they don't indicate how much.

Dr. PECK. Pardon?

Chairman BYRD. They don't indicate how much.

Dr. PECK. Well, that's right. Again, the four models indicate an increase of 1 to 5 °C or something like that by the middle of the next century, but each model is dead wrong in some cases, and they are a very simplified approach. They don't have mountain ranges in them, they don't take into account ocean currents, they don't take into account the clouds, and that's probably the largest factor, they don't handle very well the water vapor, the evaporation of water vapor and the precipitation of rain. That's one of our roles is to have better hydrologic input into those models and a better review of the hydrologic output.

To that end under this program we are stationing hydrologists both at NCAR, the National Climate Center in Boulder, and at the NOAA Climate Modeling Center at Princeton.

ROLE OF CLEAN COAL TECHNOLOGIES

Chairman BYRD. Given the fact that 58 percent of our electric power generating capacity is coal based, what contributions are clean coal technologies likely to make in helping to reduce the amount of carbon dioxide that is released into the atmosphere?

Dr. PECK. I'll give you an answer, Senator. I do suggest that this is a good question to ask the Department of Energy, which has a major program in the carbon cycle.

It seems to me that clean coal technology could have these sorts of effects. Some clean coal technology involves the removal of mineral matter from coal, mineral matter like pyrite or barcenite that we use in sulfur, but also fragments of rock. In many cases those rocks are carbonate. So when you burn the coal they emit CO_2. So that's one way that it could reduce CO_2 emissions.

Better efficiency certainly could reduce CO_2 emissions just by requiring lesser coal burning to achieve a certain energy level.

I do not know what the effect of fluidized bed combustion or burning at a higher or lower temperature would do as far as CO_2.

It's a very important matter, though, and I would be pleased to look into the matter a little more thoroughly and give a better response, but also suggest some of the experts, particularly in the Department of Energy, who might be able to give a fuller answer.

Chairman BYRD. All right.

[The information follows:]

CARBON DIOXIDE AND CLEAN COAL TECHNOLOGY

Clean-coal technology is directed at the removal of pollutants such as sulfur, arsenic, and cadmium. While carbon dioxide scrubbing is utilized by the gas industry, USGS has no firm knowledge of a similar technology for coal. Such technologies are mostly in the realm of private industry and DOE.

The USGS does, however, provide vital information on the chemistry and other aspects of coal that affect the utilization of clean-coal technologies such as gasification or fluid-bed combusters. For example, coal of lower rank (that is, coals with high hydrogen content) are easier to gasify than are higher ranking coals. Coals also vary widely as to contents of pollutants (that is, sulfur, arsenic, and cadmium) and other materials such as sodium and iron that affect utilization of specific clean-coal technologies. Knowledge of these factors are critical for the nation for the increased utilization of coal in an environmentally acceptable manner as well as for the development of state-of-the-art extraction, purification, and combustion technologies

CLIMATE CHANGE IMPACT ON WATER RESOURCES

Chairman BYRD. If climate changes do occur, as some scientists expect, over the next several decades, what impact would this have on the Nation's water resources?

Dr. PECK. Well, that's pretty hard to read, Mr. Chairman. Some models would predict lower precipitation, and some models would predict higher precipitation. It varies from region to region and from season to season. The models are in pretty good agreement during the wintertime, but they are not nearly in as good agreement during the summertime.

If you raise the temperature, that changes the activity of plants. The pores on the leaves close up and they grow better. So it's a very complex relationship. Part of our program, however, is to look at a couple of examples. One is the Delaware River, and our plan is to take some of these scenarios of future climate change and see how well we can detect them with our monitoring networks and what would be the impacts.

In a basin like the Delaware River there are lots of possible impacts. Philadelphia gets its drinking water out of the Delaware River, not too far upstream from the fresh water/salt water interface. Well, if you have decreased flow in that salt water interface upstream, Philadelphia is going to have to find another place to get its water or adjust to drinking salty water, which is unlikely.

We are also going to be looking with the Bureau of Reclamation at one or more basins in the West where a small change of rainfall in inches per year could have a very dramatic impact on irrigation, on farming and on our compacts with the Mexicans, our treaty obligations as far as water quality.

So we will be seeing what we can do.

Chairman BYRD. What is the Geological Survey doing to estimate the future changes in water resources that would occur if the climate does change?

Dr. PECK. Well, as I pointed out, we are working with the climate modelers to get a little better handle on the output from these global circulation models. We are planning to do some research on evapo-transporation in order to provide better input to these models. Evapo-transportation now is measured by putting water out in a pan and seeing how fast it evaporates or measuring the flux of moisture over a forest. But to extrapolate that to a large area of many more degrees of size where you can measure it with remote sensing is a difficult matter, and we are working on that.

Mr. Cohen, can you think of others?

Mr. COHEN. Snow and ice.

Dr. PECK. Oh, we're also looking at the retreat and advance of glaciers using Landsat imagery when it's available worldwide to see whether that's advancing or retreating and whether more water or less water is stored in ice. We are also looking at permafrost in the Arctic and we'll be looking to see whether areas of permafrost expand and contract. Those are the kinds of matters we're looking at.

LANDSLIDE PROGRAM

Chairman BYRD. Your budget justification states on page 102 that:

> Landslides are among the Nation's most costly and destructive geologic hazards causing $1 to $2 billion in economic losses and 25 to 50 deaths yearly in the United States.

I understand that the Geological Survey conducts a program to inventory and map the landslide-prone areas of the country.

The budget on page 105 indicates that you have completed the first comprehensive assessment of the landslide problem in all States. Is that correct?

Dr. PECK. Yes; it is, Senator.

Chairman BYRD. How does this program help to reduce the hazards from landslides?

Dr. PECK. Part of it is to make the information available to communities and professionals throughout the country as to where to expect the hazards from landslides, to provide better technology for studying them and better models to be able to predict when the landslides will occur.

In some areas we have studied enough so that we can predict given the past rainfall and the intensity of current rainfall when and where one should worry about landslide hazards. We have in the bay area a partnership with the National Weather Service to make those sorts of predictions utilizing volunteers from all around the bay area to measure precipitation. So partly it's to know the phenomena better, and in a few areas to establish partnerships and to monitor and predict landslide occurrences.

I think in West Virginia there has been an intensive study of the landslides that accompanied the very heavy rainfall and the flooding in the northern part of the State.

Perhaps Dr. Morgan could say more about that.

Dr. MORGAN. We are trying to correlate many factors associated in that area, and this is in Pendleton County I believe, associated with such things as rainfall, lithology, the type of rock, degree of slope, land use and land cover, and to try to develop a more comprehensive picture of where landslides occur and what the expected magnitude of the landslide problem would be with a given rainfall occurrence.

Dr. PECK. One way to deal with landslides is to outline the areas because of the slope or the nature of the rock or the nature of the vegetation that a landslide is likely to occur, or maybe a landslide occurred in the past and it's just sort of sitting there ready to slide again, and get that information into the hands of the State and county and city people so that important buildings such as hospitals aren't built on those landslides.

Chairman BYRD. Why did you select Pendleton County?

Dr. MORGAN. Because of the flooding that occurred and intense landslides that occurred in 1985.

Chairman BYRD. But did it occur then more than it did in Preston County, Tucker County, Grant County, or Hardy County?

Dr. MORGAN. Well, obviously, if funds had been available, we could have perhaps done a larger study.

Dr. PECK. I will say that we worked very closely for years with Bob Irwin, who is the State geologist, an admirable man, and now with Larry Woodfork, who is the State geologist, and who was the deputy State geologist for many years. So by and large what we do in West Virginia we do in partnership with Larry and his organization.

Chairman BYRD. Well, as you have indicated, West Virginia, and as I have indicated, it has extensive landslide problems, and I believe as your budget indicates, that is one of the eight States with the most extensive such problems.

I note that your budget describes activities you will undertake in a number of States in fiscal years 1989 and 1990, but I noticed that West Virginia was not mentioned.

Dr. PECK. That may be, Senator, I'm not sure, but we will be pleased to supply for the record a complete list of our activities under the landslide program and highlight in somewhat more detail what we are doing in West Virginia.

[The information follows:]

LANDSLIDE PROGRAM ACTIVITIES

FY 1990 landslide program activities outside of West Virginia include:

o Monitoring for issuing real-time landslide warnings in the San Francisco Bay area and transfer of technology to other landslide-prone areas.

o Development of a probabilistic procedure for predicting landslide susceptibility for the State of Vermont.

o Continue preparation of landslide susceptibility maps of Vermont and New Mexico.

o Compilation of a prototype landslide susceptibility map of a 7 1/2-minute quadrangle in Puerto Rico and development of a methodology to apply the same technique to other areas at different scales.

o Preparation of a report and maps illustrating landslide problems on a State-by-State basis.

Specifically in West Virginia, landslide studies are limited to Pendleton County and adjacent areas where the rainfall of November 4-5, 1985, triggered over four thousand landslides and caused extreme flooding in Pendleton County. The storm created a unique, well-defined geomorphic experiment for evaluating critical controls on landslide susceptibility, and for assessing the relation between rainfall and landslide hazards.

Studies under this project have four areas of emphasis: 1) analysis of the distribution of 1985 landslides to determine geologic and land use controls on the occurrence of landslide hazards, 2) analysis of the expected frequency of landslide-triggering storms based on the relationship between rainfall and the spatial density of slope movements triggered by the 1985 storm, 3) analysis of the role of landslides in producing down-stream flood damage from increased sediment loads, and 4) prediction of long-term landslide and flood hazards from analysis of the stratigraphic record and evaluation of climate change over the last 10,000 years.

A preliminary report is in press as a chapter in "Landslides of North America", Geological Society of America Special Paper no. 236. More detailed reports of landslides and flood damage of the 1985 storm in the Cheat and Potomac River basins are in preparation to be published as a U.S. Geological Survey Bulletin. The bulletin is being prepared in cooperation with researchers from West Virginia University, University of Maryland, and University of Virginia. Multidisciplinary studies of the floodplain stratigraphy and flood history of Petersburg and Moorefield, W. Va., are also underway under this project, in cooperation with the U.S. Army Corps of Engineers, West Virginia Geologic and Economic Survey, and the Interstate Commission on the Potomac River Basin.

Chairman BYRD. How do you choose the projects to be accomplished in a given fiscal year? Is there some sort of ranking process?

Dr. PECK. Usually one has to prioritize. In all the programs we tend to deal with 2-, 3-, 4-, or 5-year projects. So every year we have some projects that are in midstream. We then deal with suggestions, suggestions from State geologists like Larry Woodfork, and from our own scientists about what are important projects to carry out because of local needs or because carrying out that project may answer some important scientific issue. It's a blend of those things, and we depend on our managers who are all professional scientists to make those decisions.

WEST VIRGINIA PROJECTS

Chairman **Byrd**. Are you conducting any specific projects in West Virginia that are not mentioned in the budget justification?

Dr. **Peck**. I don't know. I hope not. We will have to look into that, Senator. That would be kind of dumb though.

Chairman **Byrd**. Well, you'll let us know then for the record, will you?

Dr. **Peck**. Yes.

[The information follows:]

U.S. Geological Survey Activities in West Virginia

The National Mapping Program is carrying out a number of activities in West Virginia. While primary map coverage (1:24,000 scale) for the State is complete and available, 38 primary maps are undergoing photorevision in FY 1989 and 16 additional maps will be photorevised in FY 1990. Five digital elevation model (DEM) projects are scheduled for completion in FY 1989. Upon completion of these projects, State DEM coverage will be 98 percent, including 100 percent coverage of the Monongahela National Forest. Conversion of planimetric map coverage at 1:100,000 scale to topographic editions is 92 percent complete in West Virginia. Two projects are in work and are expected to be finished in FY 1989, thereby completing 1:100,000 scale topographic State coverage. The Clarksburg 1:250,000 scale map was recently completely revised and will be published in FY 1989 in the new metric/side panel format.

Some of the work carried out in West Virginia in geologic programs is part of regional study units and some detail is given below. West Virginia is a participant in the FY 1989 COGEOMAP program and this effort is projected to continue in FY 1990. The mapping to be carried out in this cooperative effort complements ongoing investigations of the energy and mineral resources of the Appalachian basin. Studies carried out under the Evolution of Sedimentary Basins program in the Central Appalachian Basin, which includes West Virginia, (p. GS -185) investigate the principal controls on resource formation and accumulation and broaden our knowledge of energy resources in such basins. The Central Appalachian Basin study has been completed and is in the report preparation stage in FY 1989. West Virginia has participated for over a decade in a cooperative agreement with the USGS for entry of data on West Virginia coals in the National Coal Resource Data System. Many topical projects that address the quality and quantity of coal in the coal-bearing States, including West Virginia, are continuing. Uranium in the metamorphic rocks in the Piedmont Province of the Eastern United States is being investigated (p. GS-201) and this study includes the panhandle area of West Virginia. This investigation is also applicable to identifying areas with the potential for indoor radon hazards. A preliminary report on the results to date is being prepared.

In FY 1989, the USGS Water Resources Program in West Virginia totaled about $1.8 million consisting of funds appropriated to the USGS, funds provided by 10 State and local cooperating agencies, and funds supplied by other Federal agencies to support water data collection and investigations activities. About half of the funds expended in West Virginia are for purposes of gathering basic water data. The water data network in West Virginia involves the collection of basic information on streamflow, ground-water levels, surface- and ground-water quality, sediment, and precipitation chemistry. The data network includes 68 sites in West Virginia operated for purposes of flood forecasting/warning. In FY 1989 the investigations program in West Virginia involves eleven studies of a wide range of water resources issues and problems. Among these projects are: a) simulation of the effects of coal mining on the water quality of the Buckhanon River, b) investigation of ground-water flow in limestone areas of Jefferson County, c) occurrence of fluoride in West Virginia ground-water, and d) elements of the Appalachian Valleys and Piedmont Regional Aquifer Systems Analysis study.

LANDSLIDE HAZARDS IN WEST VIRGINIA

Chairman **Byrd**. How do landslide hazards in West Virginia compare to those in other parts of the country?

Dr. **Peck**. Dr. Morgan.

Dr. **Morgan**. Because of the shales and unstable slopes in many parts of Appalachia, it is one of the very critical areas in the country. You have annual landslide activity in fact in much of Appalachia. We also have major landslide problems in many of the Western States.

Chairman **Byrd**. What additional work is needed in West Virginia to aid in reducing the hazards to life and property caused by landslides?

Dr. **Morgan**. I think we continue with the type of projects such as the one we are developing in Pendleton County that I mentioned a moment ago to try to continue to correlate such problems as lithology, slope, and failure under specific rainfall conditions.

Chairman **Byrd**. So the fact that West Virginia was not mentioned in your budget, the activities that were described by your budget was an oversight, or are you telling me that it should have been mentioned?

Dr. **Peck**. I think we will have to look into that, Senator. They have finished the studies and they may or may not have started other studies. It's a relatively small program I think funded in the order of magnitude of $2 million a year.

Chairman **Byrd**. What was that you last said?

Dr. **Peck**. I said it's a relatively small program, the landslide program, and I think it's funded at a level of about $2 million a year, and there are only a small number of projects under that nationwide.

EARTHQUAKE HAZARDS REDUCTION PROGRAM

Chairman **Byrd**. Well, I just have a couple of additional questions.

The Geological Survey is proposing as part of its fiscal year 1990 request to reduce the earthquake hazard reduction program by $2 million. According to the budget justification this will require reductions of seismic monitoring and earthquake potential studies in Alaska, Washington, Oregon, Utah and Nevada, Missouri, and Tennessee.

Cost reductions would be obtained through eliminating regional seismograph networks and terminating grants to universities. Your budget justification describes these networks and the associated research analysis as "providing the foundation for developing an understanding of the geologic potential for damaging earthquakes."

What is your rationale for the reduction?

Dr. **Peck**. Well, Mr. Chairman, it's one of many programs where with a very constrained budget we have had to cut and we were able to restore only part of the funds that Congress added to the budget for fiscal year 1989. You talked earlier about the constraints on the budget, and this is another example of it. It's a very important program.

We have recently completed a study in southern California to document what the likelihood would be of a really major earthquake far greater than this recent one in the Soviet Union, and that would cause billions of dollars of damage.

Now our program is not aimed at preventing earthquakes, but one can save a lot of lives and loss of property by advanced warning, and a better understanding of earthquakes is important.

Chairman **Byrd**. As to the States I mentioned, has the Geological Survey concluded that the potential for a damaging earthquake in these States has been reduced or eliminated?

Dr. **Peck**. No; not at all, Mr. Chairman.

VOLCANO HAZARDS PROGRAM

Chairman BYRD. The Geological Survey's fiscal year 1990 budget proposes to eliminate $500,000 in funding for the volcano hazards program which Congress added in fiscal year 1988 and again in fiscal year 1989 to provide for the monitoring, data analysis and warning capabilities for selected Alaskan volcanoes. In combination with the proposed reductions of $2 million in the Earthquake Hazards Program, Geological Survey support for the operation of the 25 seismograph stations in the Cook Inlet and any stations elsewhere in Alaska would be completely eliminated.

I'm sure that my friend, Ted Stevens, is probably interested in this.

What is your rationale for this reduction? Has the Geological Survey concluded that the potential for a damaging earthquake or a volcanic eruption in Alaska has been reduced or eliminated?

Dr. PECK. No; we have not concluded that. Again, this is another result of a very constrained budget. Those funds were added by Congress following the eruption of the Augustine Volcano, and they represent a partnership between the Geological Survey and the University of Alaska at Fairbanks that has a very able staff. Half of the funds go to the University of Alaska for analyzing the signals that come from the seismographs. It is indeed unfortunate that we will have to eliminate that network as a result of the cut in funds.

PRIVATIZATION OF MAPPING STUDY

Chairman BYRD. Given the amount of appropriated funds that has already been invested to accomplish the modernization of the mapping activities and the potential benefits that may derive therefrom, why is the National Mapping Division undertaking a study of the feasibility of privatizing all of its primary mapping and revision and the small, intermediate and special mapping functions?

Dr. PECK. Well, we and many other Bureaus in the Federal Government are looking at opportunities for privatization of activities. In the Geological Survey we are looking at possible privatization of stream monitoring, stream gauging and possible privatization of parts of the mapping program.

I think it would be very unfortunate to propose contracting out the whole mapping operation. I think that's an important Federal function, but we have for many years contracted out aspects of it and still retain control of the situation.

For example, our facility at Sioux Falls, SD that we discussed earlier, that is a contracting-in operation with 80 percent of the employees from private industry. We contract most of our photographic work in our laboratory in Denver and that works very well.

Every year we contract out aspects of our work. The photogrammetric work for several quadrangles and the conversion into digits in a computer readable form of the linework on some maps. We do that on a job-by-job basis retaining control of the situation, but utilizing competition among private industry in order to try to save taxpayers some dollars and also to keep alive out there a good private industry mapping capability so that in time of an emergency we and the Defense Mapping Agency can use that private industry to augment our own capability.

Keeping the right kind of balance is the important thing. So we are going to conduct this study, and we're supposed to come up with a work plan by the end of this month, as I recall, and we'll be looking into it quite seriously, but doing it in a responsible sort of way.

Chairman **Byrd**. How much will you be spending on this type of work?

Dr. **Peck**. I'll ask Mr. Starr, the head of our Mapping Division. How much would we spend on this study? Not a lot, I don't think.

Mr. **Starr**. About 15 people in the next fiscal year would probably spend about 3 or 4 staff-years to study this activity.

Chairman **Byrd**. That would be about how much money?

Dr. **Peck**. Oh, maybe $100,000 or $200,000 over the next several years.

Mr. **Starr**. $150,000 to $200,000.

Dr. **Peck**. And at the present time we probably contract out, Mr. Starr, what percent of our mapping?

Mr. **Starr**. We contract out about $30 million of our total income for mapping. It varies, as Dr. Peck has already said, for some of the activities that go on in the National Mapping Division.

Dr. **Peck**. All the aerial photography is contracted out.

Mr. **Starr**. Aerial photography and maintenance of hardware. We contract for digitization of particular data that we put in our database.

Chairman **Byrd**. On what page of the Geological Survey's fiscal year 1989 justification can the description of this study and the request for funding be found?

Dr. **Peck**. The question is where did we describe this study in the budget document? Did we describe it at all in the budget document?

Mr. **Starr**. No.

Dr. **Peck**. I fear not, Senator, but we would be pleased to describe it for the record.

[The information follows:]

Privatization Feasibility Studies

The U.S. Geological Survey (USGS) has been requested to conduct two privatization feasibility studies. One study will focus on the Primary Mapping and Revision, and Small, Intermediate, and Special Mapping activities of the National Mapping Division and the other on the Water Resources Division's hydrologic data-collection activities.

The USGS is currently developing the study plans, with supporting costing data, that will outline the scope of the feasibility studies. At this time, the USGS has not completed a detailed description of the studies.

REPROGRAMMING GUIDELINES

Chairman **Byrd**. Is this, as I understand it, a reprogramming?

Dr. **Peck**. I think the study of alternative ways of achieving our objectives are just part of our natural authority.

Chairman **Byrd**. So there is no reprogramming request as required by the committee's reprogramming guidelines?

Dr. **Peck**. I was not aware of that, Senator.

Mr. **Itteilag**. I think, Mr. Chairman, that would be something we would want to look at and perhaps discuss with the staff. That's a pertinent question on matters of this type it seems to me.

Dr. **Peck**. That's the law.

Mr. **Itteilag**. Well, it isn't the law, but it's part of the understanding that we have with the subcommittee, and we will look at that issue.

Chairman **Byrd**. When can we see that reprogramming request?

Mr. **Itteilag**. Well, I think first we need to decide if reprogramming is either required or desired and then it would be some weeks after that, but I think we can address the fundamental issue over the next few days.

Dr. **Peck**. I will say we were not singled out by the Department. We are one of a number of Bureaus that are looking at alternative ways of privatization.

ADVANCED CARTOGRAPHIC SYSTEMS

Chairman **Byrd**. When do you expect that development of the advanced cartographic systems will be completed?

Dr. **Peck**. Most of the investment takes place over the next several years. The question, Lowell, is when this will be completed. In 1994?

Mr. **Starr**. 1995.

Chairman **Byrd**. How much additional funding will be required to complete development of the systems?

Dr. **Peck**. Again, I'll turn to Mr. Starr.

Mr. **Starr**. This is a long-term program that we are collaborating on with the Defense Mapping Agency, and we have a budget profile that started in I think this last fiscal year with a substantial increase in fiscal year 1989 and a substantial increase asked for in fiscal year 1990. The funding will continue on at a higher level through 1993 and then drop off out to the year 2000 at a maintenance level. The figures that we have projected forward, are being re-examined as requested by OMB and we will present them to the Department for their approval before they are presented in total. Our level of funding for the next fiscal year according to the President's budget is $33 million, which is an increase of $15.3 million.

Dr. **Peck**. There has been a substantial effort over the last several years and the next several years, and it's an order of magnitude of $100 to $200 million, but the end result should be very cost effective when we have done the cost studies to see that cost effectiveness.

Chairman **Byrd**. Is that an increase of $15.3 million or 15.3 percent?

Mr. **Starr**. $15.3 million.

Chairman **Byrd**. Will completion of the advanced cartographic systems allow you to increase the number of annual revisions and, thus, help reduce the backlog of primary map revisions?

Dr. **Peck**. Yes; very much so, Mr. Chairman. It should increase the efficiency and the rate at which we can do those revisions substantially.

Chairman **Byrd**. What is your estimate of the total costs associated with the technological transition for the Geological Survey's mapping activities?

Dr. **Peck**. Again, I'll turn to Mr. Starr.

Mr. **Starr**. To the year 2000 we estimate it's going to cost something on the order of $200 to $370 million. As I said, we are studying that. We have presented some numbers to OMB, and they have asked us to go back and take a new look at that. We are doing that now, and we are working through the Department.

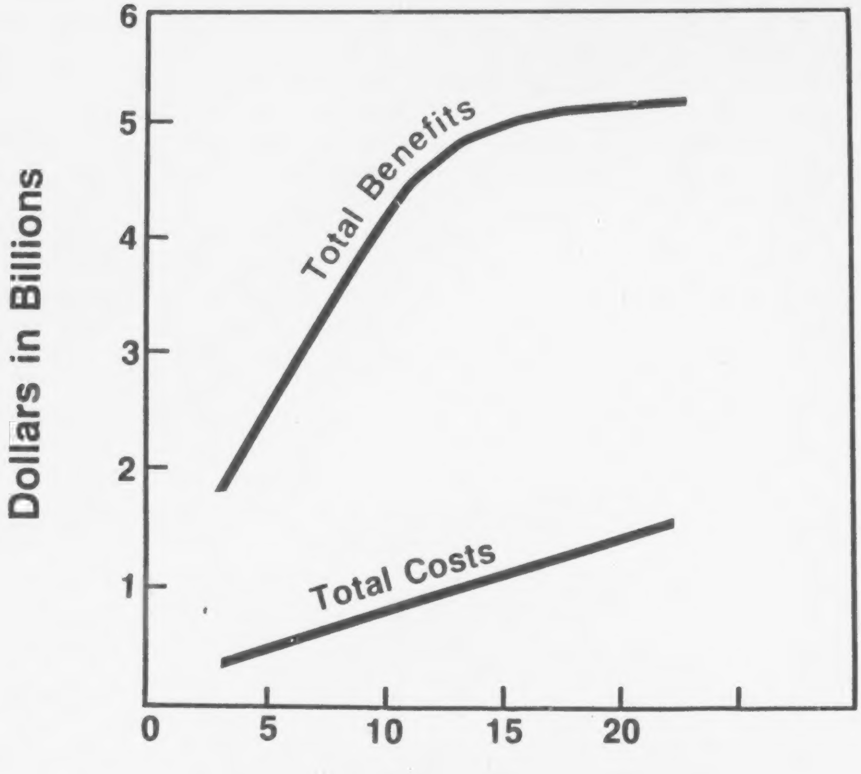
Chairman **Byrd**. What is your estimate of the net benefits to be derived from this technological transition?

Mr. **Starr**. Well, we have done a fairly extensive study, a primary economic analysis, and based on the study that we have conducted, it appears that we can show benefits on the order of about $3 billion, and we actually have a briefing board here, $3 billion to the year 2000.

It depends on the level of effort that one wants to conduct. If you were to take a look at the lower level of activity there, that's the number of quadrangles that one might revise, and the most beneficial revision level would be about 12,000 quadrangles per year which would show us a benefit of about $4 billion to the year 2000. That is probably not a possible thing to do. The more logical area of endeavor would be about 6,000 revisions per year which would show us a benefit of about $3 billion.

PRIMARY MAP REVISION BENEFITS AND COSTS

Net Present Value 1989 thru 2000



Quadrangles Revised Annually
(Thousands)

Annual Map Revisions	Net Total Benefits
6,000	$ 3 Billion
12,000	$ 4 Billion

Dr. **Peck**. This is the result of a study of primarily Federal, but also some of the State users, and there is a tremendous cost savings from having up-to-date maps because that means that the users, most of the other Federal agencies as well as State and local agencies and private industry don't have to go out and update those maps themselves at great cost. So we do it once, and then everybody shares the benefit of it.

So it's important to have up-to-date maps, and this new technology will allow us to do that at a reasonable cost.

Mr. **Starr**. As we said before, this is a collaborative effort with the Defense Mapping Agency whereby they are providing the software to us at no charge except for those particular modifications to meet our special requirements, and the hardware will be purchased at their cost as well. We believe there is a factor of about 5 to 1 at least of savings to us, which would be no more than about a 10-percent investment based on their total investment.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. Dr. Peck, the subcommittee will have additional questions, I'm sure other Senators will, and I would ask that you respond to those questions as promptly as you can.

I certainly thank you and your associates for readjusting your schedule as you did very quickly and for bringing all of this vast store of knowledge on board on such short notice.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

U.S. GEOLOGICAL SURVEY

Flexible Freeze

According to the "Building A Better America" budget document submitted by President Bush, additional funds are proposed for the Geological Survey for surface and groundwater quality research. As I understand it, $7 million is to be divided between the Geological Survey and the National Oceanic and Atmospheric Administration (NOAA) at the Department of Commerce.

Question: Has OMB provided details as to how this money will be split between the two agencies?

Answer: The Geological Survey FY 1989 budget for surface- and ground-water quality research is $57.2 million. Budget documents submitted to Congress for FY 1990 contain $55.4 million in funds for surface- and ground-water quality research. The Geological Survey is unaware of any increased allocations to conduct additional surface- or ground-water quality research.

Question: Will the Geological Survey be conducting the water program at the $57 million level identified on page 92 of the "Building A Better America" budget document?

Answer: Yes, the Geological Survey is conducting a surface- and ground-water quality research program of $57.2 million in FY 1989.

Question: Is President Bush aware that, less than one month after his proposals were released, they are not being followed?

Answer: We believe that the Geological Survey is carrying out a surface- and ground-water program that is in line with the Administration policy and budget proposals.

Global Climate Change

Your FY 1990 budget justification identifies funding increases for a new global climate change initiative as follows: $1 million to design and develop a system to provide and maintain land earth science data sets to support global change research; $2 million to begin long-term maintenance and conversion of satellite and remote sensing data into a data archive to support global change research and investigations; and $2 million for research concerning the relationship of hydrology to climate change. The total requested funding increase in FY 1990 for the global climate change initiative appears to be $5 million.

Question: Dr. Peck, on page 1 of your testimony you state that "the FY 1990 request of the USGS includes an increase of $7 million for expanded research on global climate change. Would you identify the additional $2 million in requested increases?

Answer: The additional $2.0 million is under the existing Climate Change Program in the Geologic Framework and Processes subactivity (p. 141-145). The increased funding will be used to carry out expanded climate change research in key areas that are not currently being addressed. This expanded research will include:

- high latitude climate change research, including monitoring of changes in glacier volumes and changes in permafrost distribution and permafrost temperature profiles, and establishing long-term (millions of years) climate records from marine and terrestrial environments from high latitudes, especially Alaska and adjacent seas;
- desertification research, including monitoring of climate/ weather in different types of deserts in the southwestern United States, and

studying climate-sensitive geologic processes in arid lands (e.g., eolian erosion and sediment transport under varying weather conditions);

- long terrestrial climate histories from key sites in North America to permit evaluation of natural climate variability and insights into the consequences of climate change on the environment at a regional scale; and

- long climate histories derived from marine sediment cores in order to reconstruct changes in paleoceanographic conditions over time scales of millions of years.

Question: How much of the requested increase for the global climate change initiative represents a real increase over FY 1989? For example, it appears that $2 million of the $5 million requested for the global change initiative is being used to cover partially the loss of the $3 million reimbursement from the National Oceanic and Atmospheric Administration (NOAA) for Landsat and other costs associated with the proposed transfer of Landsat authorities from the Department of Commerce to the Department of the Interior. I understand that you anticipate receiving additional reimbursements of $1.1 million from NASA and the Agency for International Development to cover the remainder of the $3 million loss. Is this correct?

Answer: The $7 million requested by the U.S. Geological Survey for the global change initiative is an appropriation increase over FY 1989. Of this increase, $1 million is for the design and development of a system to provide and maintain land earth science data sets in support of global change research; $2 million is for the beginning of long-term maintenance and conversion of satellite and remote sensing data into a data archive; $2 million is for expanding climate change research in key areas such as high latitude, desertification; and $2 million for research concerning the relationship of hydrology to climate change.

During FY 1989, funding totalling $1.1 million is being received from NASA and the Agency for International Development to support the AGRHYMET (Agriculture - Hydrology - Meterology) program in Africa. These reimbursable programs are an ongoing effort with the USGS and are not directly related to the USGS global change initiative.

Question: How long will it take to complete development of the land earth science, satellite, and remote sensing data base?

Answer: The USGS Global Land Data and Information Management System will consist of the archive mentioned above and capabilities for data cataloging, inquiry, retrieval, processing, and distribution. In addition, capabilities will permit network access of information from data systems and archives located at other organizations. System development activities will be completed by FY 1994. However, the archive will be continually expanded with existing and future satellite data and a variety of other earth science data sets used by global change researchers. Providing access to the data base and reproduction and distribution of data will be an ongoing job.

Question: What is your estimate of the additional funding required to complete development of the data base?

Answer: Funding to complete development of the data base is estimated to increase until the system is operational. At that point it is anticipated that funding requirements for operation, archiving of new data, and system upgrading, would be less than was required in the development phase.

Question: Once the data base is established, how do you intend to use it?

Answer: The system will be the primary source of land-related earth science data for the United States and international global change programs. It will be developed together with capabilities for archive data inquiry, retrieval, processing, and distribution, ensuring availability of the data in formats compatible with user requirements. The long-term goal is to link these capabilities and the archive with data systems of other organizations through worldwide networks.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Overall Budget

Consistent with previous fiscal years, the Administration's request for the Department of the Interior's portion of this Subcommittee is proposed to reduce from the FY 1989 enacted level of $4.6 billion to the FY 1990 requested level of $4.1 billion.

The Geological Survey does much better than the rest of the Department. The Survey's FY 1989 enacted level is $451.5 million and the FY 1990 request is $452.2 million. In addition, the FY 1990 request is well above the FY 1989 request of $425 million.

Question: What was the amount of the request the Survey made of the Department? Of OMB?

Answer: For FY 1990, the Geological Survey's budget requests to the Department and OMB were $512.9 million and $469 million, respectively.

Question: To what do you attribute your comparative success?

Answer: Between FY 1989 and 1990, the Survey's budget remained almost level with an increase of approximately $1 million or 0.2 percent. It should be noted that the FY 1990 request is virtually a level budget with the FY 1989 enacted levels and includes increases of $15.3 million for Advanced Cartographic Systems, $7.0 million for global climate change activities, $1.3 million for follow-on investigations in the Exclusive Economic Zone, $1.7 million for toxic substance hydrology, $1.7 million for geologic mapping, and $30.8 million in program decreases. In addition, the USGS in FY 1989 absorbed $10.5 million in pay act and retirement system costs.

Mineral Resources in Idaho

I would like to briefly continue a line of questions I initiated in the FY 1989 hearing relating to the mapping work in the State of Idaho.
In response to a question for the record last year, you indicated that the field work in the Hailey (1:250,000-scale quadrangle) is scheduled to be completed in FY 1989 and reports written and submitted for review in FY 1990.

Question: Is that still accurate?

Answer: Mineral resource assessments of the Hailey quadrangle are conducted under the National Mineral Resources Assessment Program (NAMRAP). Field work is still scheduled for completion in FY 1989, with reports written and in review in FY 1990. Publication of some reports is already in progress. As of January 1, 1989, publications include 9 reports, 2 maps, and 35 abstracts of work under way. Moreover, the Hailey project plans to be a major contributor to the 89th Northwest Mining Association Annual Convention to be held in Spokane, WA, in December 1989. The Hailey assessment team plans a half-day session each of talks and poster presentations.

Question: Are adequate funds (for Hailey) included in FY 1990?

Answer: Absorption of fixed costs has somewhat reduced funding for most projects in the program including the Hailey quadrangle. Total funding available for the Hailey quadrangle in FY 1989 is approximately $750,000 and for FY 1990 is $375,000 when reports will be in the review process.

Question: Are both preassessment studies of the Sandpoint and Jordan Valley quadrangles still scheduled to be completed by June of 1989?

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Answer: The pre-field study of the Jordan Valley quadrangle will be completed by the end of March 1989. This quadrangle was given a high priority because of the need for minerals information to evaluate wilderness and national park proposals for public lands in southwest Idaho. The Sandpoint quadrangle is still scheduled for completion in FY 1989.

National Mapping

You have proposed an $878,000 decrease (-2 percent) from the base for the Cartographic Data and Map Revision program (pg. 39). This proposed decrease will delay the availability of additional base data required by Federal agencies for integration with existing data at 1:100,000-scale.

Question: How did you determine where to take this reduction?

Answer: The Cartographic Data and Map Revision program decrease results from the continuation of the Administration's FY 1989 policies and priorities in the President's budget for FY 1990. The delay in the production of some 100,000-scale data is a result of the USGS focusing efforts on higher priority needs expressed by Federal agencies during the solicitation of the A-16 requirements.

Question: How long will the additional base category be delayed?

Answer: Without readjusting priorities or an increase in Joint Funding Agreements, the impact of this revised level of production of Digital Line Graphics data from the 1:100,000-scale maps would result in a 3-year delay nationwide availability of these data.

Side-Looking Airborne Radar

Consistent with previous budget proposals, you have proposed to terminate the Side-Looking Airborne Radar (SLAR) program for FY 90 (pg. 47). The justification indicates that sufficient SLAR data has been acquired and made available to the public to demonstrate their utility.

Question: What percent of the U.S. has been mapped using SLAR?

Answer: Total SLAR coverage to date is 1,235,000 square miles, 34 percent of the United States.

Question: If I were to look at a map of the U.S. indicating SLAR coverage, what areas would I find covered?

Answer: Attached for the record is a map that displays SLAR coverage for FY 1980 through 1988.

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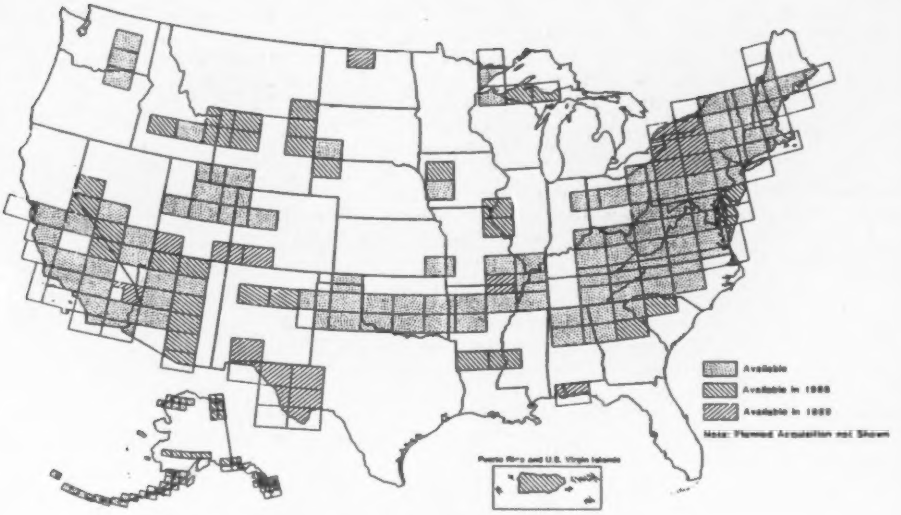
Available
Available in 1988
Available in 1989
Note: Planned Acquisition not Shown
Puerto Rico and U.S. Virgin Islands

U.S. GEOLOGICAL SURVEY SIDE-LOOKING AIRBORNE RADAR (SLAR)
ACQUISITION PROGRAM, 1980 - 1988

Question: Who uses SLAR data and why have they picked the funding?

Answer: The principal users of SLAR are Federal and State geologists, other earth scientists and private industry. Sales data show that 50 percent goes to private industry; 27 percent to Federal agencies; and 17 percent to State, local governments, and academia; and 6 percent to private individuals and foreign governments.

Information and Data Systems

You have requested a reduction of $1.0 million (-13 percent) in the Information and Data Systems program (pg. 52). The justification indicates that, among other things, this reduction will result in reduced customer assistance, and longer delivery times for USGS products.

When I review the workload data, however, I note that the only anticipated output reduction will be in the number of Image Frames Processed and Distributed.

Question: Can you elaborate on the impact of this decrease?

Answer: The decrease in the Information and Data Systems subactivity will result in a reduction in service and contractor personnel assigned to the offices that assist USGS customers and photo lab processing facilities. This reduction will have the direct effect of reducing customer assistance and will result in longer delivery times for certain USGS products.

Global Change Data Systems

The Survey has requested $3.0 million in FY 90 to initiate a new program; Global Change Data Systems. This program is being proposed to respond to the need for improved earth science information with respect to the issue of Global Climate Change.

The funding is comprised of two parts:

First, $1.0 million is requested to support the design and development phase of a system. The system will provide data to support investigations in Global Climate Change.

Second, $2.0 million is for the long-term maintenance and conversion of satellite land remote sensing data.

A quote from a famous scientist whose name I don't recall stated recently that the amount of funds we provide for "global warming" should not exceed our knowledge.

Question: I've read the bureaucratic and scientific justification for this program, but what are your real plans?

Answer: There are two main aspects of our plan. The first is to design and develop a system for scientists studying global change to readily obtain the right kinds of data. This includes being able to contact a single location to find out what types of data are available, and where to obtain them. To accomplish this, the USGS will develop a systematic cataloging and indexing system, and provide network contacts with other data centers to help users find out what data are available.

The second aspect of the plan is to preserve as much of the existing 17-year record of Landsat data as possible. To do this, the Survey will convert data currently in the archive (on magnetic tape) to a more permanent storage medium, and develop the hardware and software to process Landsat data not now in the archive to this same medium. If steps are not taken, a significant portion of Landsat data will not be available to the user community. The Survey will also develop a plan to add other types of satellite remotely sensed data to this archive.

Question: After this data base is established, how do you foresee it being utilized?

Answer: The data base (consisting of earth science data plus Landsat and other satellite data) will be especially useful to scientists studying global change processes who want to make comparisons between current conditions and conditions in the past. An important function of the data system will be the ability to provide remotely sensed data in formats that are compatible with earth science data, so that scientists can integrate these different data sets into their modeling and analysis programs. These data will also be used by resource managers, planners, and environmental specialists in the public and private sectors. Because the data sets will be in compatible formats, these users will also be able to use them for their land resources-related work.

Question: After the system is developed, what do you see as the long-term funding of this effort?

Answer: Funding to complete development of the data base is estimated to increase until the system is operational. At that point it is anticipated that funding requirements for operating, archiving of new data, and system upgrading, would be less than was required in the development phase.

The USGS is also cooperating with NASA to develop a role for USGS to process and archive data from the land-observing instruments from NASA's Earth Observing System (EOS). According to current plans, NASA will provide significant funding during the early years of the EOS program to process and begin archiving EOS data at the USGS EROS Data Center. USGS will have program and budget responsibility for long-term data preservation, which is consistent with our other proposed archiving activities.

Question: How are you planning on coordinating with other private, State, and Federal entities on this project?

Answer: Plans to develop a global change data system and to preserve Landsat and other satellite data are being coordinated with the user community. Feedback is expected from groups such as The National Academy of Sciences Committee on Geophysical Data, The Interagency Working Group on Data Management for Global Change, the Committee on Earth Sciences, and the Interagency Arctic Research Policy Committee. These groups represent a variety of users of earth science data and satellite data, and are interested

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in making earth science data available for global change research. The USGS will look to these groups for input, especially as it relates to identifying the kinds of data that scientists want for global change studies, such as soils data, land-cover data, and vegetation data on a global or continental scale.

Question: What was your request of the Department for this program? Of OMB?

Answer: The request to the Department for the design and development phase of the Global Change Data System was $2.0 million. The Department's request to OMB for this activity was $1.0 million. In the OMB passback, OMB approved $1.0 million for the data system and added $2.0 million for long-term archiving maintenance and conversion of satellite land remote sensing data.

Question: How does this program relate to the additional $2.0 million requested for in the Climate Change program (pg. 144)?

Answer: The additional $2.0 million is under the existing Climate Change Program in the Geologic Framework and Processes subactivity (p. 141-145). The increased funding will be used to carry out expanded climate change research in key areas that are not currently being addressed. This expanded research will include:

- high latitude climate change research, including monitoring of changes in glacier volumes and changes in permafrost distribution and permafrost temperature profiles, and establishing long-term (millions of years) climate records from marine and terrestrial environments from high latitudes, especially Alaska and adjacent seas;
- desertification research, including monitoring of climate/ weather in different types of deserts in the southwestern United States, and studying climate-sensitive geologic processes in arid lands (e.g., eolian erosion and sediment transport under varying weather conditions);
- long terrestrial climate histories from key sites in North America to permit evaluation of natural climate variability and insights into the consequences of climate change on the environment at a regional scale; and
- long climate histories derived from marine sediment cores in order to reconstruct changes in paleoceanographic conditions over time scales of millions of years.

Geographic and Spatial Information Analysis

You have proposed a decrease of $897,000 (-14 percent) in the Geographic and Spatial Information Analysis program (pg. 68). This decrease will impact two programs. A $522,000 decrease will result in 18 fewer cooperative research and development projects being conducted in FY 90 (-60 percent) and $375,000 will decrease the number of cooperative demonstration projects in GIS technology R&D and the acquisition of the advanced hardware (-29 percent).

Question: Why does a relatively small decrease have such a large productivity impact? Are coop projects really that expensive?

Answer: A recent review of the budget justification and backup material for the decrease in Geographic and Spatial Information Analysis program determined that the proposed reduction will result in 6 fewer cooperative research projects.

Question: Are any of the 18 cooperative research projects which funds are not requested for FY 90 ongoing?

Answer: It is anticipated that the reduction in 6 cooperative research will be taken against projects that are non-recurring or that have concluded in 1989.

Question: If so, how many were to conclude in FY 89?

Answer: All of the 6 projects are expected to be concluded in FY 1989.

Advanced Cartographic Systems

You have requested an additional $15.3 million (+47 percent) for the Advanced Cartographic Systems program in FY 90 (pg. 73). This increase is necessary in order to keep pace with the parallel DOD/Defense Mapping Agency procurement program. These parallel efforts should reduce equipment and software costs.

The FY 90 request is consistent with the long-term funding plan submitted to the Subcommittee during last year's hearing.

Question: Are the out year funding estimates still accurate?

Answer: The FY 1990 and 1991 outyear funding estimates are still accurate; however, the estimates beyond that are being reviewed within the Administration.

Question: Please submit for the record the funding increments you anticipate to complete this effort.

Answer: The Geological Survey is in the process of refining projected outyear funding estimates and will provide this information to the Congress following approval by the Department and the Office of Management and Budget.

Earthquake Reductions

You have proposed a $2.0 million (-6 percent) reduction in the Earthquake Hazards program. This proposal will require reduction of seismic monitoring and earthquake potential studies in Alaska, Washington, Oregon, Utah, Nevada, Missouri and Tennessee.

Question: How did you determine that these would be the areas reduced? Do they have the lowest risk of earthquake?

Answer: Earthquake risk is a combined function of likelihood of occurrence and resources (people and facilities) exposed to the hazard. Recent studies have shown that there is a high probability of a major large earthquake in California in the next 30 years. These probabilities for California are judged higher than for other parts of the United States. The large population and economic position of California in the world economy, particularly in the aerospace, electronics and defense industries, suggests that California faces the largest earthquake risk of any State. Within the available funding, earthquake monitoring efforts will be concentrated in the area where the risk is highest, although other states could experience potentially damaging earthquakes.

Question: What is the value of the equipment that will be idled if this reduction is enacted?

Answer: Although equipment in these regional networks represents a variety of vintages and technologies, the present value of such equipment would amount to at least several million dollars.

The FY 1990 justification indicates that this funding reduction will also require an FTE reduction from 474 to 464.

Question: Why did the FY 1989 budget have a similar budget reduction for this program yet not a corresponding proposal to reduce FTEs?

Answer: The difference in FTE estimates for the two years is a product of the fact that the Geological Survey redistributes available FTE for each fiscal year based on estimates of requirements. The FY 1990 reduction is associated with overall administration goals to reduce the size of the Federal workforce.

Question: How did the number of FTE's go from 451 in FY 1988 to 474 in FY 1989 when the justification indicated that full funding of the program would require 451 FTEs? I don't see a change in the anticipated workload.

Answer: The estimate of 474 FTE is the result of a temporary allocation to the USGS of 82 FTE of which 23 were allocated to the Earthquake program. The allocation was not provided in FY 1990 as part of an overall FTE reduction.

Volcanic Hazards

You have proposed a $500,000 decrease in the Volcanic Hazards program which will require that the monitoring, data analysis, and warning capabilities of Cook Inlet volcanoes in Alaska undertaken in FY 1988 and FY 1989 will be discontinued (pg. 101).

In response to a question for the record at last year's hearing, you indicated that when the original $500,000 was added in FY 1988, $250,000 was to be used to purchase 5 new seismograph stations and for the installation in USGS offices in Anchorage of a new computer system to detect and locate earthquakes. The remaining $250,000 was committed to the University of Alaska Geophysical Institute in Fairbanks for development of seismic analysis and interpretation capability.

Question: Has the equipment been purchased?

Answer: The $500K per year has to date:

o purchased and installed 8 new seismic stations
o purchased 3 volcano tilt meters which are being installed in FY 1989
o established a geodetic survey net
o supported the first phase of hazards mapping of Augustine volcano
o operated the network for Cook Inlet Volcanoes

Question: If so, why does the justification indicate that $500,000 is necessary to operate the program?

Answer: Major expenses are incurred after installation of seismic stations, particularly when we are dealing with inaccessible volcanoes in Alaska. These expenses include telemetry networks operating 24 hours a day in near real time from the volcano to the computer and field maintenance of equipment including several days of helicopter support. Acquisition of the Anchorage computer facility will begin using some of the FY 1989 funds.

Question: Has the program been expanded?

Answer: No, the program has not been expanded; however, the program does have to shift efforts to meet unexpected volcano activities, and still meet the yearly cost to operate the network and conduct the volcano hazard studies. Expenses for such an Observatory cannot always be anticipated in advance, for example: 3 seismic stations on Augustine have quit working, unusual activity has been recorded recently on Mt. Spurr (the closest one to Anchorage) requiring three new stations to be installed there, and unanticipated activity at Mt. Dutton continues to be a major draw on existing resources.

You are proposing to conduct investigations in FY 1990 of the effects of ground water on eruptive processes in the Cascades (pg. 92).

Question: Please elaborate on this proposal for the record.

Answer: Ground water studies are proposed for the Cascades volcanoes starting in fiscal year 1990. Ground water is a factor in at least two types of hazards associated with volcanoes. Water that comes into the vicinity of heated materials within a volcano system can become superheated providing the pressure to trigger an explosive eruption. Ground water may also be a major source of water in a mudflow or lahar that results from a volcanic eruption.

Knowledge is very limited with respect to the movement or occurrence of ground water in volcanic systems. The proposed study will help us to better understand volcano ground-water systems and should help us better assess the potential for explosive eruptions and better evaluate the associated potential for mudflows. The ground-water flow paths in the vicinity of Cascade volcanoes are complex, and the presence of hot rock or magma bodies at depth can disrupt and distort the flow fields. Ground-water flow controls convective heat transport in and around volcanoes, thus affecting geothermal resources and the distribution of hot springs. The great topographic relief of volcanoes provides a significant potential for driving regional ground-water flow, affecting the quantity and quality of ground-water resources in adjacent areas. The initial research investigations would include monitoring temperatures of ground water and hot springs, geophysical investigations of subsurface structures and potential magma bodies, collection and compilation of geochemical properties of springs, ground water, and fumaroles (springs or geysers which emits steam or gaseous vapor), and theoretical modeling of heat flow and consequent effects on subsurface hydrology in mountainous volcanic areas.

National Geologic Mapping

You have requested an increase of $1.8 million in FY 1990 (+10 percent) for the National Geographic Mapping Program. Of this increase, $1.468 million is for the geologic mapping component to produce primary geologic maps and companion special-purpose maps (pg. 130). While you haven't identified specific mapping targets you have identified potential candidates.

Question; I can understand why we would want to know the geologic structure of federal lands in the northwest. I do not, however, understand why the geologic structure of urban corridors of the Atlantic region or industrial corridors of the Great Lakes is a high priority.

Answer: The Atlantic Coastal Plain is a 10-state geologic province that extends from New York on the northeast to Florida on the southeast. The province extends from the Atlantic shore inland for as much as 150 miles, and is underlain by a variety of sedimentary geologic materials. The Coastal Plain region is estimated to contain as much as 20 percent of the Nation's population distributed among urban centers like Long Island, the Newark-Trenton-Camden axis, the Delaware and Chesapeake Bay systems, the Baltimore-Washington-Richmond-Norfolk corridor, the Raleigh-Durham-Chapel Hill triangle, and the Charleston-Savannah corridor. The latest demographic data from the Bureau of the Census project that the Atlantic Coastal Plain region will undergo rapid population growth by the year 2010, as existing population centers coalesce to form interconnected corridors. Areas like Maryland, New Jersey, Georgia, and Florida can anticipate population-growth increases on the order of 18 to 36 percent in 20 years and States like New Jersey can expect population densities that average 1,192 persons per square mile.

The Atlantic Coastal Plain and adjacent continental shelf are a major source of materials like phosphates (apatite), monazite, clays (montmorillonite, kaolin), ilmenite and other titaniferous minerals, and quartz. Economic quantities of these minerals are widely used for fertilizers (phosphate), ceramics and filters (montmorillonite), silicon glass (quartz sand), and high-tech metallurgy and ceramics (titanium and rare-earth elements).

The people living in the Atlantic Coastal Plain have major infrastructure requirements that will only increase as population grows. These requirements include: (1) quality and quantity of ground water that flows through sedimentary materials of the Coastal Plain; (2) industrial materials (sand, gravel, lime, rip-rap, decorative stone) for residential and commercial construction, dams, and high-speed rail lines and expressways; (3) avoidance and mitigation of geologic hazards (slope failures, radon-potential zones, and subsidence due to ground-water withdrawal and carbonate dissolution); and (4) appropriate geological sites for the isolation of toxic and industrial wastes. Geologic maps provide the single-most powerful tool for displaying, interpreting, and translating the geologic information required by land-use planners and developers who must make decisions about these infrastructure requirements.

The industrial corridor of the Great Lakes region is an 8-state region that extends from New York on the east to Minnesota on the west, and includes technology, heavy industry, and resource centers like the Rochester-Buffalo axis, the steel-belt cities of Pennsylvania, Ohio, and Indiana, lakeshore shipping centers bordering the Great Lakes, and the iron-ore province of Minnesota. This region provides much of the heavy-industry output of the Nation, and is a major shipping center for agricultural and manufacturing products for domestic and foreign consumption. Earth-science issues in this region include slope-failure hazards along major river valleys, coastal erosion caused by rising lake levels, local oil and gas resources, radon associated with geologic terranes, and the iron-ore resources of the Superior province. Of major concern is the quantity and quality of ground-water resources related to the disposal of industrial and toxic wastes generated by heavy manufacturing and petrochemical industries. Geologic-map information is needed to respond to each of these issues, particularly to forecast the contamination potential of waste-storage sites in relation to geologic parameters such as fracture patterns, horizontal and vertical layering characteristics, and geologic barriers to ground-water flow.

Question: What is the purpose of these additional funds? To identify geologic structures for use or to identify geologic hazards?

Answer: The proposed funding increase to National Geologic Mapping will be used to generate multipurpose geologic-map information and companion special-purpose maps for high-priority targets within the Atlantic Coastal Plain, Great Lakes corridor, Pacific Northwest, agricultural midcontinent, and other geographic regions where national need has been identified. The maps will contain scientific information and interpretations about geologic structures and geologic-unit boundaries (faults, shear zones, folds, fractures, rock contacts) and about the makeup of geologic units (physical and chemical characteristics). The geologic information will serve multiple purposes, including mineral-, energy-, and water-resource applications, geohazard applications, and general land-use planning applications.

Question: What do you mean by an "earth-science problem"?

Answer: An earth-science problem is any societal issue that requires input from the solid-earth sciences--several specific examples are identified above. Generic examples include metallic and nonmetallic minerals issues, energy issues, ground-water issues, environmental-quality issues, geohazard issues, planning for multiple land uses in the face of competing demands on land resources, and basic-research issues that must be addressed in order for geologic materials to be properly utilized, developed, and managed by the private and public sectors.

Question: How are you going to perform these tasks without an increase in FTE's?

Answer: The scientific staff assigned to current investigations that are nearing completion will be directed to new studies where the needs are determined to be greatest. New funds will be used for operational expenses which are not now being incurred but are necessary to develop the geologic data displayed on the geologic maps. Such operational expenses include travel and per diem costs for fieldwork, acquisition costs for aerial photography and remotely sensed data, and the cost of sample analyses to determine chemical composition and geochronology using geochemical, isotopic, and paleontologic processes.

Mineral Resource Surveys

In FY 1989, $1.5 million was added to the Survey's budget to carry out mineral resource investigations of roadless and RARE II lands. This effort was to be carried out and coordinated with the Bureau of Mines (pg. 171).

I note that the FY 1990 justification has not requested funds for this program.

In response to a question for the record on a different subject at last year's hearing, you indicated that amounts added by Congress above the FY 1988 budget were not continued in the FY 1989 budget (pg. 1126, Part 1).

Question: Was that policy carried forward into the formulation of the FY 1990 budget?

Answer: During the FY 1990 budget formulation process, consideration was given to FY 1989 enacted funding levels and specifically to programs which were funded by the Congress beyond the requested level. The FY 1990 budget request is an attempt to achieve a balance among these programs and the Administration's priorities, given the fiscal constraints required to reduce the federal deficit.

Question: If (this) policy did not exist for FY 1990, would you have requested funds for this project?

Answer: In formulating the FY 1990 budget, we were confronted with many initiatives addressing compelling national needs, but also were constrained by the need to exercise fiscal restraint. Our decision was to balance our request as best as possible to the broad range of resource and other earth-science issues that the USGS must address.

Question: If the policy did not exist, would this have been a higher priority than the $1.468 million increase requested for National Geologic Mapping? If not, why not?

Answer: The National Geologic Mapping Program (NGMP) was assigned a higher priority because mapping and research products from the program are designed to meet critical needs in regions where a large number of earth-science issues contribute significantly to the Nation's economic, social, or scientific well-being. Geologic maps and their derivative products are fundamental to all earth-science disciplines, including mineral resource investigations. As an example, four mapping projects under the NGMP in Idaho provide valuable information in support of mineral investigations there. Moreover, general geologic mapping in the program provides the base for the additional more specific geologic mapping required for mineral resource assessments by the National Mineral Resources Assessment Program (NAMRAP) in several 1:250,000-scale quadrangles.

Question: What is the funding plan for this project? Please submit for the record the funding increments necessary to fulfill the three agency work plan developed last November.

Answer: The current work plan is applicable for about five years with level funding at an annual rate of $1.5 million for USGS and $1.2 million for the Bureau of Mines.

Strategic and Critical Minerals

I must commend the Survey for your continued efforts to prioritize: initiate new programs while scaling back on lower priority programs. While I may disagree with the specifics, I compliment the movement in that direction.

I am continually perplexed by the priority you give the Strategic and Critical Materials Program. In FY 1990, you are proposing to spend an additional $5.0 million on Global Climate change, an additional $1.5 million for the National Geologic Mapping Program, an additional $15.3 million on the

Advanced Cartographic Systems, and an additional $1.3 million on the Offshore Geologic Framework Program.

Yet, the Strategic and Critical Materials Program and the National Mineral Resource Assessment Program remain flat or decreasing.

While I support many of the initiatives you have taken, I do not understand why the identification of unknown onshore resources is comparatively low priority.

Question: Do you care to comment?

Please provide for the record an incremental analysis of what the Survey would do with additional resources in this area.

Answer: Funding of $9,708,000 included in the FY 1990 President's Budget for the Strategic and Critical Minerals Program is appropriate and as part of the $45,977,000 requested for Mineral Resource Surveys has a high priority. If additional resources were provided, additional activities could include: (1) development of geophysical, geochemical, and geologic models of environments favorable for the occurrence of mineral deposits that contain strategic minerals, (2) collection of new geophysical and geochemical data over covered parts of the Nation, and (3) compilation of three-dimensional mineral-resource assessments to one-kilometer depth as a result of the new geophysical and geochemical data.

Offshore Geologic Framework

You have requested an additional $1.3 million (+5 percent) for the Offshore Geologic Framework Program (pg. 157). These additional funds would allow for verification surveys of the EEZ in the Gulf of Mexico, American Virgin Islands, and the east coast, and the investigations of geologic framework of the U.S. continental margins.

The EEZ is the largest frontier of public land remaining to be explored. In response to a question at last year's hearing, you stated that the offshore studies provides us with an opportunity to study modern analogs of processes recorded in the onshore geologic record.

I don't want to sound like a broken record but I continue to be perplexed as to why you are ramping up your offshore efforts and leaving your onshore flat or declining.

Question: I certainly agree that the resource potential of the EEZ is important to the nation but have we done all that is necessary onshore?

Answer: For some areas of the onshore, we probably have done all that is necessary, at this time. For other onshore areas much remains to be done and a large portion of the Survey's budget request is for onshore mineral resource activities, whereas the offshore activities represent only 16 percent of the Geologic and Mineral Resource Surveys Activity's portion of the budget request. An extremely effective and efficient way to study the geologic processes controlling resource distribution is the study of modern depositional and ore-forming environments in the offshore. In that respect the Exclusive Economic Zone (EEZ) mapping conducted by the USGS is providing new insights into the development of modern submarine fan systems and the processes of ore formation. Over fifteen submarine fans have been mapped in varied geologic settings - in the Bering Sea, Gulf of Mexico, and off the U.S. west and east coasts - and striking differences have been found. Both offshore and onshore valuable occurrences of oil and gas are associated with ancient river deltas and fans.

Understanding the details of the processes of modern fan formations enables more effective exploration and exploitation of the resource potential of both modern (Mississippi fan) and ancient fans (Stevens Sands in the oil-rich San Joaquin Basin).

Our EEZ mapping and verification studies also allow us to study the modern geologic processes that are critical in controlling ore formation. The information that we are obtaining on minerals, such as cobalt-enriched manganese crusts and polymetallic sulfides, are directly applicable to onshore resources, helping to target prospective geologic settings. For example, the Rocky Mountains are a region where ancient seafloor has been incorporated into the continent. A manganese deposit in the Canadian Rockies, based on recent studies, has been identified as associated with an underwater volcano that has now been accreted to North America.

Question: Does the offshore verification provide more onshore benefits than simply using additional funds onshore?

Answer: Data collection such as GLORIA is much more cost-effective, by a factor of 5 or more, and often times it is more informative to collect data to define the geologic and tectonic setting offshore as compared to onshore. Prospecting models developed completely or in part from offshore activities are important for targeting the location of potential onshore resources that are present on the surface as well as those hidden in the subsurface.

Question: Of the EEZ which has been verified, how much of the identified resources are economically viable to produce?

Answer: Whether resources are viable for production or not is dependent on the economic climate for the commodity. In the case of oil and gas, the Gulf of Mexico is an example of the offshore production of resources being very important to the nation. Analyses of side-scan sonar survey data from the Gulf of Mexico EEZ indicate that the movement of salt controls the complex morphology of the continental slope seaward of Louisiana and Texas and that salt tectonics and thick sediment accumulations have contributed to formation of a major offshore petroleum play in this region called the Flexure Trend. Development of advanced exploration techniques for the exploitation of petroleum resources in this deep-water frontier area currently is underway. In the case of mineral resources, placer deposits (e.g., gold), aggregate, and phosphates can be viably produced offshore, given the present economic climate. Both the Federal Republic of Germany and the Republic of Korea are actively studying cobalt-enriched manganese crusts in the Pacific Ocean, further indicating that this may be a viable resource.

Geothermal Investigations

As a result of a proposed $1.0 million reduction (-18 percent) in the Geothermal Investigations Program, research activities in support of hydrologic modeling and assessment of geothermal systems of the Cascade Range will be slowed (pg. 210).

Question: Can you describe the funding provided to this program in the past?

Answer: The following table displays the funding for the Geothermal Investigations Program for FY 1986 through 1990.

(Dollars in thousands)

1986	1987	1988	1989	1990
$5,642	$5,950	$5,967	$5,908	$4,905

Question: How will this program only be slowed with a $1.0 million reduction? What will be left?

Answer: The Geothermal Investigations Program has funded a multidisciplinary research effort in the Cascade Range for the past several years. The goal of this research effort is to understand the volcanic and tectonic evolution of the range, the structure and thermal regime of the upper crust, the interaction of magmatic systems and hydrothermal systems, and ultimately, the distribution of geothermal resources. Because of the complexity of these physical relationships, the paucity of knowledge about the Cascades prior to this undertaking, and the large area of the Range, the level of funding has been on the order of $2-3 million per year. Rather than terminate investigations just short of fruition, we will slow the overall effort, thus delaying completion of research projects and the resultant resource assessment.

Regional Aquifer Systems Analysis

You have requested a reduction of $484,000 (-4 percent) for the Regional Aquifer Systems Analysis (RASA) program (pg. 240). The justification indicates that the decrease will defer the planned FY 1990 start of the Northern Rockies Intermontane Basin study by one year.

Question: Are there other studies being initiated in FY 1990?

Answer: Yes. A study of the Alluvial Basins of Southern California will be restarted in FY 1990. The study was first started in FY 1985, but was suspended in FY 1986 to divert funds to the Central Valley for the study of the Kesterson Reservoir area and the origin of selenium in ground water.

Question: If so, why was it decided that this study would be deferred?

Answer: Two considerations led to the deferral of this study: (1) In this program it is more efficient to postpone a single project rather than to reduce funding of several ongoing projects; and (2) the work accomplished during the year prior to postponement of the Southern California RASA would provide a sound basis from which to restart the project. Accordingly, it was decided to restart the Southern California study rather than the Northern Rockies Intermontane Basins study.

Question: What is the purpose of this study?

Answer: To conduct hydrologic investigations that will quantify the effects and consequences of ground water development, and to define the magnitude of the ground water resource.

Question: Why is it such a low priority?

Answer: A low priority was not assigned to this project. As stated above, deferral of this project by 1 year was thought to be a wiser alternative than reducing funding of ongoing studies.

Toxic Substances Hydrology

You have requested an additional $1.7 million (+13 percent) to initiate an additional point source study relating to gasoline contamination of ground water and to support a major regional study of non-point source contamination within the soybean and corn-growing region of the upper Midwest (pg. 260).

Question: What do you mean by an additional gasoline study? How will the new study relating to gasoline contamination of ground water differ from the current study?

Answer: The Toxic Substances Hydrology Program is not currently conducting a study of a gasoline-contamination site. A gasoline-contamination site had previously been considered for study, but preliminary review indicated that it did not provide suitable research opportunities. The trichloroethylene-contamination site at Picatinny Aresenal was selected instead.

Question: What is the purpose of the non-point source contamination study of the upper Midwest?

Answer: The purpose of the nonpoint source contamination study of the upper Midwest is to determine the effect of agricultural practices on ground- and surface-water quality. Toward this end, studies will be conducted to understand the fate of agrichemicals as they move from their point of application and through the environment: the soil and unsaturated zones, through ground water and surface water, in and on sediments, and through the atmosphere. Past studies of agriculture's effect on water quality have generally been limited to selected parts of the environment such as the soil zone or surface water. By including all parts of the environment in the proposed study, it will be possible to determine the major transport, storage, and transformation mechanisms and thus decide on the most beneficial ways to limit the potential for water contamination.

Bruneau Hot Spring Snail

The State of Idaho is, unfortunately, blessed with a particular snail that has been given a great deal of attention. I won't bore you with the details but I do want to ask you a few questions about habitat.

The Bruneau Hot Spring Snail is known to exist in springs adjacent to the Indian Bathtub Hot Spring in Idaho. Some feel that the water flows from the aquifer may become inadequate to provide the habitat for the snail.

In lieu of listing the species on the endangered species list, funds were provided to the Fish and Wildlife Service, with the Geological Survey and others, to initiate a recovery plan for the snail.

There are those who say that the springs adjacent to the Indian Bathtub Hot Spring is the only known habitat area for the Bruneau Hot Spring Snail.

Question: What is your role in the conservation plan?

Answer: The role of the U.S. Geological Survey in the conservation plan is to define the hydrologic system and try to determine with hydrologic models the impacts of man's activities on the flow regime of the springs. Model simulation of the system will allow predictions of changes in ground water pumpage on spring discharges.

Question: Are you familiar with the springs adjacent to the Indian Bathtub Hot Spring in Idaho?

Answer: Yes. The Indian Bathtub Hot Spring had an average discharge of about 2,000 gallons per minute (gpm) in 1922, and a peak discharge of 2,500 gpm was measured in 1963-64. By 1978 the discharge was near zero and has not improved since then. The other springs in the adjacent area are believed to be hydraulically connected, and we expect to learn much more in the next 3 years.

Question: Are the characteristics of these springs unique?

Answer: All springs have certain characteristics in common, but some have unique aspects. Our investigations will serve to determine how these springs function hydraulically and will determine if there are unique aspects in water chemistry. It is likely that the chemistry of these geothermal springs will be an important component of the habitat of the Bruneau snail.

Question: Can these characteristics be found elsewhere?

Answer: Once these springs have been characterized for a variety of attributes, the U.S. Fish and Wildlife Service will be actively searching for equivalent characteristics in the region.

Question: Have you searched for a habitat similar to this?

Answer: No. Our investigation has only begun in the last several weeks. Information gathered on the hydrology and water quality will be reported to the U.S. Fish and Wildlife Service soon after compilation.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

Federal-State Cooperative Program

Question: The Fiscal Year 1989 appropriation for the USGS' cooperative federal/state program for water resources investigations is approximately $58.9 million. President Reagan's FY 1990 budget request for this important program was $55.5 million. Has the Bush Administration's request for the line item been determined as yet?

Answer: Yes, the Bush Administration request for this program is also $55.5 million; there has been no change to President Reagan's FY 1990 budget for the cooperative program for water-resources investigations.

Question: It is my understanding that the national appropriation for this federal/state program is allocated to the various USGS regions based on past regional program needs. Apparently, in the 1960's, federal funds exceeded the ability of states to provide matching funds. Funds were allocated based on need. As fewer federal dollars have been made available, the percentage of the total allocated to each region has remained constant since the 1960's. For example, if in the 1960's a region got 35% of the total allocation, it still gets 35% in the 1980's. Is this an accurate understanding of the allocation system?

Answer: Funds appropriated for the Federal-State Cooperative Program have historically been distributed from Headquarters to each of the four USGS Water Resources Regions considering: (a) changing program priorities; (b) the availability of Federal appropriations and State matching funds; (c) requirements associated with ensuring the long-term integrity of the national water-data network; (d) multi-year commitments to jointly funded investigations; and (e) the desire to avoid large and abrupt shifts in the allocation of funds which can result in severe personnel dislocations and the disruption of programs which have been jointly planned with State and local cooperators. As a consequence, although the distribution of funds among Regions does change with time, these changes are typically achieved by making gradual and manageable adjustments from one year to the next.

The individual States comprising each Water Resources Region have changed several times, as a result of major reorganization, since the early 1960's. Therefore, it is not possible to construct comparable records on the distribution of funds to the Regions over this entire period. However, the same Regional structure (with only minor adjustments) has been in existence since FY 1973, and data on the distribution of funding among the Regions during this period follows:

Percent of Total Federal Cooperative Funds

Fiscal Year	Northeast	Southeast	Central	Western
1973	28%	19%	30%	23%
1975	27%	23%	29%	21%
1980	28%	22%	29%	21%
1985	28%	26%	26%	20%
1989	28%	27%	25%	20%

More illustrative evidence of changes in the availability of Federal matching funds among Regions is seen by examining the differing growth rates in the level of resources allocated to the various regions over this timeframe:

Percent Change in Federal Cooperative Funds
FY 1989 versus FY 1973
(dollars in millions)

Fiscal Year	Northeast	Southeast	Central	Western
1973	$5.8	$3.9	$6.2	$4.7
1989	16.5	15.7	14.7	12.1
% change	+ 184%	+ 303%	+ 137%	+ 157%

As can be seen, changes have occurred in the distribution of funds among the regions during the time period in question. Among the programmatic causes for these changes have been: (a) the emergence of strong interest in energy related water issues in the Northeast and Central Region States in the mid- to late 1970's; (b) growing emphasis on water quality issues within the Cooperative Program, especially since the early 1980's -- most of the increase in funding allocated to the Southeast Region during this time period is associated with expansion of water quality activities with the States that comprise this Region.

Question: Does this allocation system not strongly favor Western states which were heavily involved in this USGS program in the 1960s? Does it not work against regions that want to, and can make a merit-based case to, increase their allocation percentage? Does the USGS propose a solution to equalize this allocation system among the regions?

Answer: The allocation system does not, and has not, favored the Western States. As can be seen in the data above, the percentages of total Federal appropriations for the Cooperative Program allocated to both the Western and Central Regions have declined over the past 17 years with much of this decline occurring since Fiscal Year 1980. During this same period the percentage of total funds allocated to the Northeast Region has remained essentially constant while the percentage allocated to the Southeast Region has grown appreciably. All of these changes have occurred gradually over a period of nearly 20 years in response to emerging program priorities and changes in the availability of both Federal appropriations and State matching funds. The method by which funds are allocated has enabled the USGS to rationally redeploy resources (personnel and funds) so as to best serve the mutual interests of Federal, State, and local governments during a period when interest in the Program has consistently exceeded the availability of Federal matching funds.

Question: The State of Vermont has requested $83,500 from this program as one of the many funding sources for a long-overdue diagnostic/feasibility study of sources of pollution in Lake Champlain, one of this country's largest lakes. The State of New York, for the same joint study, has requested $107,325 from this same source. Where are these project requests on the USGS' list of priorities? What level of FY 1990 national funding for the federal/state water resources program will be necessary to support this joint funding request for the States of Vermont and New York? Please brief me on the status of those requests. Thank you.

Answer: We are in the early stages of negotiating with Cooperators on the composition of the Federal-State Cooperative Program for FY 1990 based on the funding level requested in the President's Budget. The President's Budget proposes to fund the Federal-State Cooperative Program at $55.5 million in FY 1990 compared to the FY 1989 enacted level of $59.8 million. As a consequence, initial planning efforts are focusing on identifying areas for possible delays. Under these conditions, it is unlikely that funding for new projects, such as the one proposed for Lake Champlain, can be provided in FY 1990.

SUBCOMMITTEE RECESS

Chairman **Byrd**. The subcommittee will stand in recess until tomorrow morning, at 9 a.m., March 7, when we will hear testimony on the fiscal year 1990 budget requests of the Bureau of Indian Affairs, the Office of Construction Management and the National Indian Gaming Commission.

Thank you very much, sir.

The subcommittee is in recess.

[Whereupon, at 1:10 p.m., Monday, March 6, the subcommittee was recessed, to reconvene at 9 a.m., Tuesday, March 7.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

FRIDAY, MARCH 10, 1989

U.S. Senate,
Subcommittee of the Committee on Appropriations,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD–132, Dirksen Senate Office Building, Hon. Harry Reid, presiding.

Present: Senator Reid.

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

STATEMENT OF W.P. (PAT) RAGSDALE, ACTING ASSISTANT SECRETARY—INDIAN AFFAIRS

ACCOMPANIED BY:

- HAZEL E. ELBERT, ACTING DEPUTY TO THE ASSISTANT SECRETARY—INDIAN AFFAIRS (OPERATIONS)
- LINDA RICHARDSON, ASSISTANT DIRECTOR, FINANCIAL MANAGEMENT
- RICHARD WHITESELL, ACTING DEPUTY TO THE ASSISTANT SECRETARY—INDIAN AFFAIRS (TRUST AND ECONOMIC DEVELOPMENT)
- LARRY D. HOLMAN, DEPUTY DIRECTOR FOR EDUCATION
- ANTHONY L. ITTEILAG, DIRECTOR, OFFICE OF BUDGET, DEPARTMENT OF THE INTERIOR
- ARTHUR M. LOVE, DIRECTOR, OFFICE OF CONSTRUCTION MANAGEMENT
- WILSON L. BABBY, DEPUTY TO THE ASSISTANT SECRETARY/DIRECTOR, INDIAN AFFAIRS (INDIAN EDUCATION PROGRAMS)
- ROBERT D. BARACKER, DIRECTOR, OFFICE OF ADMINISTRATION
- KAY C. KEELY, ACTING CHIEF, DIVISION OF PROGRAM DEVELOPMENT AND IMPLEMENTATION

PREPARED STATEMENT

Senator Reid. The subcommittee will come to order.

This is the time scheduled to hear testimony from the Bureau of Indian Affairs. We may also have questions regarding the facilities program of the Office of Construction Management, as well as the newly authorized National Indian Gaming Commission.

The fiscal year 1990 request for the Bureau of Indian Affairs for appropriated funds is $1,101,236,000. This represents an increase of $11,864,000 over the fiscal year 1989 appropriation. I would note, however, that $11,250,000 of the increase assumes enactment of the credit reform legislation to be submitted by the Office of Management and Budget.

It is my understanding that we will have testifying this morning Mr. W.P. (Pat) Ragsdale, Acting Assistant Secretary for Indian Affairs.

Mr. Ragsdale, the committee welcomes you. I would like you to introduce your associates and summarize your statement, and then we'll proceed with questions. Your complete written statement will be included in the record at this point.

[The statement follows:]

STATEMENT OF HON. W.P. RAGSDALE

Mr. Chairman, members of the Committee, I am pleased to appear before you today to present the fiscal year 1990 budget for the Bureau of Indian Affairs.

The fiscal year 1990 request for the Bureau totals $1,499,094,000 in annual funds, permanent appropriations and trust funds. Of this amount, $1,101,236,000 represents direct Federal appropriations in support of the operation of Indian programs, construction and loan activities and payments related to various settlement acts. These funds are used to support numerous activities in the areas of education, social services, law enforcement, natural resource protection and enhancement, Indian rights protection, construction and maintenance of facilities, and general administrative costs in carrying out the Federal Government commitments to more than 900,000 Native Americans. The Bureau of Indian Affairs budget is the largest of the bureaus in the Department of the Interior and accounts for 22 percent of the entire Departmental budget for the coming year.

For the Bureau's major operating account, the request includes $953,316,000, a decrease of $19,304,000, or approximately 2 percent, below the fiscal year 1990 base. Of the total budget for the Operation of Indian Programs, $256 million is requested for Tribe/Agency programs. This compares with a fiscal year 1989 enacted level of $254.5 million.

The fiscal year 1990 budget request includes sufficient resources to maintain the current operations of the Bureau and includes increased funding for several programs in line with newly-enacted legislative requirements, and for high priority programs in substance and alcohol abuse and child neglect and abuse.

The Indian Education Amendments Act of 1988 established a new pay scale for school teachers and counselors. The budget includes an additional $4.6 million for these costs, the total of which is to be phased-in over a 3 year period. We share with Congress the hope that the improved salary levels will make long-term commitments to teaching in Bureau-funded schools a more attractive option for highly qualified educators. Along with the salary adjustments, the Bureau will continue implementation of the Effective Schools program which was begun last year. Approximately $1 million has been earmarked for this effort in each of the 2 years.

Specialized training will be provided to faculty, dormitory and support personnel, and the Office of Indian Education Programs will continue to recognize exemplary schools and to pair our outstanding schools with those requiring additional guidance and direction. The budget also includes an additional $2.7 million to implement changes made to the Indian School Equalization Formula by the recently enacted education amendments. We are, of course, pleased to note Secretary Lujan's interest in our educational program and look forward to strengthening our relationship with the Department of Education in order to better provide those Indian students attending Bureau and contract schools with a strong educational foundation.

Included in the request for Tribal Services is $4 million to equip, staff and operate the emergency shelters/halfway houses and juvenile detention centers for which construction funds were appropriated as part of the Anti-Drug Abuse Supplemental Appropriations Act of 1987. We anticipate that construction of most of the emergency shelters will be completed during this fiscal year and that planning will be accomplished for the juvenile detention facilities, with actual construction of the latter continuing into fiscal year 1991. A substantial portion of the $3 million requested for juvenile detention facilities will be used to purchase equipment needed prior to these facilities becoming operational. Once these one-time costs have been met, the base funding will be used for staffing and operations for fiscal year 1991 and beyond. Also included in Tribal Services are additional funds to aid the Bureau's acknowledgement and research efforts to reduce the backlog in processing petitions for Federal recognition.

In addition to these programs and as part of the overall Federal effort to prevent and ameliorate the harmful impacts of substance abuse, the Bureau's budget includes: $1.9 million in education for employment of counselors skilled in dealing with substance abuse and for training of academic and dormitory counselors to improve their skills in this area; $251,000 to support the Substance Abuse Coordination Office; approximately $300,000 for training of tribal court personnel; $1.3 million for law enforcement training associated with eradication efforts and for the costs of marijuana eradication; increases totaling $698,000 for law enforcement training and operations; and continued funding for the Tohono O'Odham Nation's program to halt drug trafficking across the Mexican border through the reservation. Along with these efforts, the Bureau will continue in-house training and employee referral programs to ensure that all Bureau employees are drug-free.

In fiscal year 1989 the Bureau requested, and Congress approved, an additional $1.5 million to increase the number of social workers and counselors in both our direct and contracted social services programs. In recognition of the continuing requirement for increased emphasis in the areas of child abuse and neglect, this budget requests an additional $3 million to expand the efforts being undertaken during the current year. While more attention has been focused in the last couple of years, both nationwide and at the reservation level, these problems did not appear overnight, and their resolution will not be a simple, nor a short-term matter. Efforts of child protection teams, educators, social workers, and the medical profession need to be marshaled and coordinated, and these Federal resources must be combined with a commitment of local communities to confront the problem and to develop workable programs to protect the emotional and physical well-being of children living on Indian reservations. To coordinate Federal resources, the Bureau in cooperation with the Indian Health Service, has established a National Oversight Committee whose purpose is to promote the protection of Indian children.

For the third year of the Employment Assistance Readiness Net demonstration program, $2 million is requested. As the projects were not begun until the fourth quarter of fiscal year 1988, it is still too early to try to assess the impacts of Bureau and tribal efforts to assist able-bodied Indian adults in acquiring the skills and self-discipline necessary to successfully compete for employment opportunities and to provide support services, such as transportation and child care, the lack of which often inhibit successful job placement. During this year and the next, the Bureau will also be analyzing the potential impacts of the recently enacted welfare reform legislation to determine if modifications may be required in the Bureau's service delivery program.

In the area of natural resources, the budget includes $144.6 million for forestry, agriculture, water resources, wildlife and parks, and minerals and mining. In addition to these funds, the Bureau would receive $31.2 million for firefighting presuppression and suppression costs from the account established in the Bureau of Land Management. If enacted, this proposal would replace the existing procedure whereby firefighting costs are usually financed after they are incurred through subsequent appropriations. This "after-the-fact" funding approach encourages the submission and enactment of budgets that do not fully account for or provide for fire-related costs.

We are pleased to report the substantial completion of efforts to eradicate prairie dogs on the Pine Ridge Reservation. Based on what we have learned from this 5-year effort, the budget proposes to begin eradication programs on four other reservations: Fort Belknap, Rosebud, Cheyenne River, and Northern Cheyenne. The Bureau also plans to intensify our efforts to control noxious weeds on reservation lands under a 5-year plan which has been developed. Three and one-half million acres of land are targeted for treatment during the 1990 and 1991 fiscal years. The parallel efforts of rodent and weed control will do much to restore to productive status millions of acres of Indian agriculture and range lands.

The Bureau has also made substantial inroads in reducing the backlog of data to be entered into the automated land records system. Efforts in 1990 and beyond will concentrate on maintaining the currency of the system to ensure that such massive backlogs do not occur in the future.

To ensure optimum return on trust funds for which the Bureau has a fiduciary responsibility and to improve investment accounting and account reporting, we have signed a contract with Security Pacific Bank for trust fund services. In fiscal year 1988, appropriated funds were used for start-up costs of the contract and for a contract with an auditing firm to reconcile the trust accounts prior to the transfer of funds to the Bank. It is anticipated that full operations under the trust fund contract will commence during the third quarter of the current year. An additional $2.4 million is requested to support the operation of the contract in fiscal year 1990.

In the area of facilities management, the Bureau has separately identified $2.5 million to be used for operations and maintenance efficiency initiatives and staff training. These efforts received funding from the operations and maintenance budget in fiscal year 1988. Both initiatives have proven to be useful by increasing efficiency in the O&M program as well as reducing future costs of facilities repair and improvement projects.

The majority of the Bureau's fixed costs, with the exception of pay and rental payments, are included in the budget for General Administration. Of the total increase of $10.3 million over the enacted fiscal year 1989 level, over $6 million is for increases in Bureauwide costs—such as unemployment compensation, payroll services, and financial management systems—which are budgeted centrally, but reflect costs incurred in all locations.

More than half of the $33 million program increase for General Administration is requested for automatic data processing services. The operation of virtually every program in the Bureau is dependent on data processing for some portion of its service delivery system. Land ownership records, general assistance payments, royalty payments to individuals, facilities management, property inventory, and a host of other activities all rely on computer services. Much of the Bureau's equipment is outdated and unable to handle current demand. The Bureau requested the assistance of the Department in reviewing our current operations and providing guidance for the future direction of the program. The Department has provided us with a report and alternative suggestions and recommendations which we will be carefully reviewing in the next several months.

In the construction programs, the Bureau has included funds to continue to address the priorities recommended by the Department's Dam Safety Task Force which established a multi-year departmentwide effort to ensure the safety of dams on Federal and Indian lands throughout the West.

The Bureau has proposed a change in budget structure which would fund road maintenance in the construction account rather than in our operations account. There will be no change in the conduct of the program, but funds will be available without fiscal year limitation. This increased flexibility on the availability of funds is requested in recognition of the impacts of weather conditions on the scheduling of roads projects.

Funds are included for the construction of the Laguna, New Mexico middle school and for the first phase of a project to replace the Pine Ridge High School which is located in South Dakota. The Coeur d'Alene Tribal School, which is currently ranked second on the construction priority list, is to be re-evaluated during the coming month based on recent information indicating a declining enrollment and the possibility of housing the students at nearby public schools.

In compliance with the recently enacted amendments to the Self-Determination Act, we have requested $9.8 million in the construction account to pay for indirect costs on construction projects. The total amount included in the budget for tribal contractors' indirect costs is $58,761,000, an increase of $5.4 million over the fiscal year 1989 enacted level.

During the last session of Congress, three water claims settlements bills were enacted, as was legislation to provide compensation to Alaskan Natives for claims resulting from military operations during the Second World War. The total cost of the water settlements is approximately $113 million in fiscal year 1990. The budget includes $15 million to be divided equally among Salt River-Pima Maricopa, Colorado Ute, and San Luis Rey water settlements. Funds are also requested to enter into an agreement with the Administrator of the Aleutian-Pribilof Restitution Act so that the extent of the claims under that legislation can be quantified.

In conclusion, the fiscal year 1990 request for the Bureau totals $1,494,094,000 an increase of $6.6 million over the fiscal year 1989 enacted level. Given the overall spending constraints facing the Federal Government, we believe that a reasonable balance has been achieved in our request that will maintain funding for current, important operations and provide selected increases for high-priority initiatives and for new legislative requirements. I will be pleased to respond to questions from the members of the committees.

BIOGRAPHY OF LARRY D. HOLMAN

Larry D. Holman, Acting Deputy to the Assistant Secretary-Indian Affairs, is a graduate of Midwestern University in Wichita Falls, TX. He has been with the

Bureau of Indian Affairs for 23 years. He brings to the Central Office, OIEP, a great deal of field experience in education. He started his career as an elementary teacher at Wingate Elementary School, then moved to Principal of Lake Valley School, Principal of Pueblo Pintado School, Principal of Ojo Encino School and Principal of White Horse Community School. For the past 17 years he has been Agency Superintendent for Education at Eastern Navajo Agency. He supervises 18 schools with a combined enrollment of 4,432 students. Mr. Holman has been instrumental in the implementation of the use of contract educators in the Bureau personnel system. He has been instrumental in the development of the personnel regulations and manuals.

Mr. Holman has been recognized repeatedly by the Navajo Tribe for outstanding performance in the improvement of education for the Navajo. Most recently, he was the recipient of the Navajo Tribal Council Education Committee award, and the Navajo Area School Board Association award. Mr. Holman is married with two children and four grandchildren.

Biography of Richard Charles Whitesell

Richard Whitesell was born in Mobridge, South Dakota on May 10, 1936. He is an enrolled member of the Standing Rock Sioux Tribe. He graduated from Standing Rock Community High School at Fort Yates, North Dakota in 1954, and immediately upon graduation, he enlisted in the United States Marine Corps. He was released from active duty in 1958 and enrolled that Fall at Dickinson State College (DSC) in Dickinson, North Dakota. He graduated from DSC in the Fall of 1961 with a BS Degree in Secondary Education.

He accepted his first teaching position at Brockton, Montana, located on the Fort Peck Indian Reservation, in 1961 and left that position in 1963 when he accepted an appointment with the Bureau of Indian Affairs. He coached and taught at the Pierre Indian School, Pierre, South Dakota, until 1965 at which time, he assumed a like position at Cheyenne—Eagle Butte High School on the Cheyenne River Reservation in South Dakota. In 1969, he received his MED from South Dakota State University in Brookings, South Dakota and that same year was selected to participate in the Department of Interior's Management Development Program in Washington, D.C. Later that year, he was selected as the Superintendent of Riverside Indian School at Anadarko, Oklahoma, leaving that position in 1971 to assume the Superintendency at Flandreau Indian School, Flandreau, South Dakota.

In 1976, he left education and accepted a position as Assistant Area Director, Indian Services, at the Phoenix Area Office, Phoenix, Arizona.

He left Phoenix in 1977 to assume the Superintendent's position at the Flathead Indian Reservation at Ronan, Montana, and in 1981, he transferred to the Wind River Reservation at Fort Washakie, Wyoming.

In 1983, he was appointed as the Area Director, Billings Area Office, Billings, Montana where he is now permanently stationed. Since August of 1988, he has been serving as the Acting Deputy to the Assistant Secretary—Indian Affairs (Trust and Economic Development) in Washington, D.C.

Biography of Kay C. Keely

Kay Keely is currently the Acting Budget Officer of the Bureau of Indian Affairs and has worked for the Bureau since 1984.

She has a Bachelor's degree in Finance from the University of Oklahoma and has done graduate work at George Washington University and George Mason University. Her 16 years of Federal service began as a GS-5 contract specialist for the Air Force. She also worked for the Bureau of Land Management and the Government Printing Office before coming to the Bureau of Indian Affairs.

INTRODUCTION OF ASSOCIATES

Mr. Ragsdale. Thank you, Mr. Chairman. Good morning. We are pleased to be here on this bright, sunny day.

Let me first introduce to my left Larry Holman, who is the Deputy Director of Education. Our current Director for Education could not be here because of a death in the family.

Sitting right to my left is Hazel Elbert, who is Acting Deputy for Operations. She has assumed my normal position while I act as Assistant Secretary.

To my right is Linda Richardson, our current Director for Financial Management for the Indian Bureau and our newest member to the Senior Executive Service for the Indian Bureau.

To Linda's right is Mr. Dick Whitesell, the Director of Trust Responsibilities Programs.

Senator **Reid**. Director of what? I didn't understand that.

Mr. **Ragsdale**. The Director of Trust Responsibilities Programs. Just behind me is Mac Love, the Director of the Office of Construction Management, and Mr. Tony Itteilag, the Director of the Departmental Budget Office.

SUMMARY OF BUDGET REQUEST

Mr. Chairman, members of the committee, I am pleased to appear before you today to present the fiscal year 1990 budget for the Bureau of Indian Affairs. The fiscal year 1990 request for the Bureau totals $1.1 billion in appropriated funds for the operation of Indian programs, construction, loan activities, and payments related to settlement acts. The Bureau of Indian Affairs' budget is the largest of the Bureaus in the Department of Interior and accounts for 22 percent of the entire departmental budget for the coming year.

For the Bureau's major operating account, the request includes $953 million, a decrease of approximately $19 million or approximately 2 percent below the 1990 base. Of the total budget for the operation of Indian programs, $256 million is requested for tribal agency programs. This compares with a fiscal year 1989 budget enacted level of $254.5 million.

I will briefly outline some of the budget highlights.

For education we have requested $7.2 million to implement the adjusted salary scale and to provide for the increased weights assigned to small schools and for students in the seventh and eighth grades. This increase is partially offset by a reduction of $2.4 million based on an anticipated continued decline in enrollment.

It is hoped that the higher level salary scales for Bureau educators will provide an incentive for highly qualified and motivated teachers to consider a career in Indian education. Our goal is to ensure an educational experience in our schools which allows each student to develop his full potential.

Throughout the Nation it has been shown that the most effective schools are those which develop close working relationships with the community. To encourage partnership with local communities, the Bureau will urge school boards and principals to take full advantage of the recent change in legislation allowing voluntary services in the schools.

A total of $4 million is requested to equip, staff, and operate the emergency shelters and juvenile detention facilities which are being built with funds appropriated under the authority of the Anti-Drug Abuse Act. As part of the administration's continuing war on drugs, increases are requested for marijuana eradication and law enforcement activities.

The budget includes a request for an additional $3 million to support reservation based social services programs to include increased resources to address child abuse and neglect problems.

As the primary trustee for Indian natural resources, we have requested $144.6 million for forestry, agriculture, water resources, wildlife and parks, and minerals and mining.

Additionally, the trust responsibility and rights protection activities include a request for $51.7 million making the sum total of the request for trust responsibilities and natural resource development $196.5 million. This level of support will assist the Bureau and the tribes in managing and enhancing these most important assets.

In addition to these funds, the Bureau would receive $31.2 million for firefighting presuppression and suppression costs from the account which is proposed to be established in the Bureau of Land Management.

To ensure optimum return on trust funds for which the Bureau has a fiduciary responsibility and to improve investment accounting and reporting, we have signed a contract with Security Pacific National Bank for trust fund services. Work will begin this year on conversion to contractual services with 1990 slated as the first full year of implementation.

To provide more efficient management of the Bureau, more than half of the $3.3 million program increase for general administration is requested for automatic data processing services and equipment modernization. The operation of virtually every program in the Bureau is dependent on data processing for some portion of its service delivery system. Land ownership records, general assistance payments, royalty payments to individuals, facility management, property inventory and a host of other activities all rely on BIA computers, many of which are overloaded and obsolete.

Funds are also included for the construction of a middle school at Lugana, NM and for the first phase of the project to replace the Pine Ridge High School which is located in South Dakota.

In compliance with the recently enacted amendments of the Self-Determination Act, we have requested $9.8 million in the construction account to pay for indirect costs on construction projects. The total amount included in the budget for tribal contractors' indirect costs is $58.7 million, an increase of $5.4 million over the fiscal year 1989 enacted level.

Prior to proposing regulations to implement other provisions of the Self-Determination Act amendments, the Bureau, along with the Indian Health Service, has been conducting extensive consultation sessions with the tribes. We expect to have a draft set of regulations developed within the next few months.

During the last session of Congress three water claim settlement bills were enacted, as was legislation to provide compensation to Alaskan Natives for claims resulting from the military operations during the Second World War. The total cost of the water settlements is approximately $113 million. Partial funding for the Salt River-Pima Maricopa, Colorado River Ute and San Luis Rey water settlements is included in the budget.

Funds are also requested to enter an agreement with the Administrator of the Aleutian-Pribilof Restitution Act so that the extent of the claims under that legislation can be quantified.

These are highlights of the budget requests. There are reductions requested for some Bureau programs, and I suspect the committee's questions will address these.

We all recognize the constraints of the Federal budget, however, and we believe that a reasonable balance has been achieved in our request which will maintain funding for current important operations and provide support for new initiatives and legislative requirements.

Mr. Chairman, I will be pleased to respond to any questions the committee may have concerning our budget request.

BUDGET REQUEST

Senator **Reid**. Thank you very much.

Do you know how many employees the Bureau of Indian Affairs has?

Mr. **Ragsdale**. Approximately 12,000.

Senator **Reid**. And how many of them are based in the Washington, DC area?

Mr. **Ragsdale**. About 300 employees.

Senator **Reid**. So most of them are spread out around the country.

Mr. **Ragsdale**. Yes, sir; we are actually located in 31 different States and have a little over 100 field locations.

EDUCATION

Senator **Reid**. The fiscal year 1990 budget request included an increase of about $4.6 million for salary adjustments for teachers and counselors to bring their salaries more in line with public schools. This increase is partially offset by a decrease of $2.4 million predicated upon declining enrollment in Bureau-funded schools.

What is the degree of disparity between teacher salaries for Bureau-funded schools and public schools?

Mr. **Ragsdale**. As I understand it, the overall salary schedule for our teachers in the Bureau of Indian Affairs is probably a little bit lower than the national average, but on a State-by-State basis it would differ somewhat. It may be comparable in some States and it may be lower in others.

Senator **Reid**. So what you are trying to do is make them comparable to the various State salaries?

That's OK. You can identify yourself and speak if you would like.

Ms. **Richardson**. The law requires that the Bureau move to DOD salary scales as opposed to public schools, and the current DOD rate averages $31,545, and the Bureau current average is $22,444.

Senator **Reid**. Say that again, those figures again.

Ms. **Richardson**. $31,545 for DOD and $22,444 for BIA.

Senator **Reid**. That's a significance difference.

Ms. **Richardson**. $9,000.

Senator **Reid**. On what basis would you distribute the additional funds being requested? Would it be across the board?

Ms. **Richardson**. Through the ISEP formula, which is also required by law, the Indian school equalization formula which treats all schools similarly.

Senator **Reid**. Can the committee be assured that these extra moneys will be spent for salaries and not on other programs?

Mr. **Ragsdale**. Yes, sir.

Senator **Reid**. Within the education program a reduction of $491,000 is proposed for school counselors—again I repeat a reduction—who handle substance and alcohol abuse programs. The Bureau cites the shortage of credentialed counselors. The budget proposes that existing counselors and teachers pick up this function.

What effect will this proposal have on the workload of the teachers and counselors and how will this affect their morale? I mean this is totally different than we are doing any place else.

Mr. **Ragsdale**. Well, I think that the Bureau has and intends to continue the recruitment for qualified counselors. As I understand, our approach in our education office is that we are providing additional training to our teachers and those personnel that would be residing in our Indian boarding schools. The number of counselors that the tribes would hire in the contract school situation is not included in those numbers for FTE.

Senator **Reid**. But isn't that contradictory if we are going to continue the recruitment, which I acknowledge is important, in cutting the salaries? That doesn't coordinate and it doesn't make sense, does it?

Mr. **Holman**. Senator, we have another funding source for counselors. That's in the Department of Education money, and the majority of our alcohol and substance abuse effort is within that funding source.

Mr. **Ragsdale**. I guess the key question then is will the solicitation for more counselors be met with the fact that more will be hired?

Ms. **Richardson**. Senator, we only had six FTE actually hired under this program in fiscal year 1988. So the 1990 budget of 20 FTE would still project an increase in the number of counselors.

Senator **Reid**. And will you be able to find those counselors?

Ms. **Richardson**. We don't know.

Senator **Reid**. Do you know if the public schools are faced with a similar problem in filling these positions?

Mr. **Holman**. Yes, sir; they are faced with this problem.

LAW ENFORCEMENT

Senator **Reid**. Despite language contained in the fiscal year 1989 statement of the managers intended to protect the base of the tribe/agency operations, particularly law enforcement, the Bureau has not proposed continued funding for several projects.

Mr. Ragsdale, do you believe that there is not a serious law enforcement problem in Indian country?

Mr. **Ragsdale**. I believe that there is a serious law enforcement problem in Indian country, as there is a serious law enforcement problem in many other locations outside of Indian country, Senator.

Senator **Reid**. The fact that tribes have placed a priority on law enforcement in 1990, an increase of about $632,000, you would agree reflects concern on their part regarding adequate law enforcement?

Mr. **Ragsdale**. Yes, sir; I would.

Senator **Reid**. How can a tribe be expected to adequately plan its programs when the Bureau will not allow increases provided in this area?

Mr. **Ragsdale**. Well, I believe the Bureau has allowed for increases in this area through the priority setting process that all of the tribes are involved in throughout the United States. The question as to what other resources and what other programs that you would have to make adjustments against is the balance that both tribal leaders and Bureau administrators have to maintain in preparing any given budget proposal.

WATER RIGHTS SETTLEMENTS

Senator **Reid**. Three Indian water rights settlements were enacted and signed by President Reagan last year. The three settlements were, and you mentioned these briefly in your statement to us, Salt River, San Luis, and the Colorado Ute. First year payments authorized under the acts total $97 million. The budget, however, proposes funding only $15 million for these settlements, favoring an incremental funding approach.

Mr. Ragsdale, did the Bureau discuss these additional funding requirements with OMB once the President signed the legislation?

Mr. **Ragsdale**. Yes; we have had ongoing discussions with the Office of Management and Budget and the Department concerning these settlement acts.

Senator **Reid**. It would seem to me that these settlements represent a commitment by the U.S. Government to the Indians. How do we explain to them that even though there is a law passed calling for *x* number of dollars, we are not going to give them that money?

Mr. **Ragsdale**. Well, the settlement acts, as I recall, were enacted and approved by the President late in last year's congressional session. We are still working on a strategy; $115 million is a significant amount of money that the Department will have to allocate in the upcoming years, and we hope to be able to work a strategy with the Office of Management and Budget and the Department to fully implement these pieces of legislation.

Senator **Reid**. In your judgment, what happens if the Federal Government fails to provide the authorized funding? Will that mean more time in court? Will that result in more lawsuits?

Mr. **Ragsdale**. Yes, sir; it would. As I understand those three settlement acts, in some instances the agreements that were reached with the parties as a part of the settlement would be voided, and the United States may incur some liabilities as a result of that.

Senator **Reid**. Do you think that's worth it?

Mr. **Ragsdale**. Do I think it's worth it to incur the liabilities?

Senator **Reid**. Right.

Mr. **Ragsdale**. No, sir; I wouldn't say that it would be. But, on the other hand, I would say that the executive branch of the Government needs to sort the particulars of each project out and develop an overall budget strategy so that we can fully fund these particular projects and implement the acts.

Senator **Reid**. My concern is that this is typical of what we do sometimes on the Federal level. We are in effect penny-wise and pound-foolish. We recognize that unless these moneys are forthcoming, there would be litigation, and it would seem to me with my limited knowledge of what is before us that they would stand a good basis, and even if they didn't, the cost is significant to the Government because we would have to allocate resources to spend our time in court. So it would seem to me that we would be better off trying to figure out a way to fund these projects as quickly as possible and avoid the litigation.

Mr. **Ragsdale**. Yes, sir; I would agree with you, and I'm hopeful that we will be able to do that as the new administration takes hold of its responsibilities and develops the strategies that will be needed to implement these pieces of legislation.

SELF-GOVERNANCE PROJECTS

Senator **Reid**. In 1988 Congress initiated a planning process for which the participating tribes would develop budgets using funds received from the Bureau of Indian Affairs in all the various program areas. An additional $1.2 million was appropriated in 1989 to continue this effort.

What is the status of these planning efforts, particularly with respect to groups who receive funding in the first round?

Mr. **Ragsdale**. You are referring to the self-governance grants?

Senator **Reid**. Yes.

Mr. **Ragsdale**. Ms. Elbert will answer the question, sir.

Ms. **Elbert**. Under the original million dollars that we got in fiscal year 1988, 10 tribes were awarded grants of $100,000 each to do the planning for the tribal budgets. With regard to the $1.2 million that was appropriated in 1989, there is some clarification I believe that's needed from the Congress as to whether or not it was intended that the first 10 tribes would get another $100,000 this year. If that's the case, then it means that there would be limited participation on the part of additional tribes if we are required to give $100,000 to each of the 10 tribes again.

So we are in the process of communicating with the Congress to get that clarification so that we will know which way to go with the $1.2 million.

Senator **Reid**. Do you have any knowledge on a more personal matter for me, do you have any knowledge of the application of the Duckwater Shoshone Tribe in Nevada to participate in this process?

Ms. **Elbert**. The Duckwater Shoshone Tribe's application was submitted to the Bureau in response to the announcement that we had put in the Federal Register proposing that we would limit or that we would award grants in the amount of $50,000 to each applicant that qualified or that was determined to be eligible for the grant.

Because the Congress then communicated with us and told us that we were in error in putting that Federal Register notice out, we have had to put that part of the grant process on hold until we get this clarification from the Congress as to how they intended the $1.2 million to be used.

Senator REID. The Cheyenne River Sioux Tribe recently submitted a very detailed fiscal year 1990 budget proposal to the subcommittee as they did last year.

Does this proposal provide the budgetary information that you envision receiving under the tribally designed budget initiative?

Mr. RAGSDALE. They are not participants in that particular project, Senator.

Senator REID. What about the information though? Does this proposal provide the budgetary information that you envisioned receiving under the tribally designed budget initiative?

Mr. RAGSDALE. I'm not sure what they currently have before the Congress, but I have seen a similar proposal, as I recall, last year that the tribe submitted, which was for an increase of approximately $1 million or more for their agency operation and, in my opinion, that is not realistic. Everybody is going to have to work from a target and prioritize their needs within some given target, as everyone has to in the Federal budgetary process.

EMERGENCY FIREFIGHTING

Senator REID. In 1989 the Congress appropriated $25 million to the Bureau to fund emergency firefighting expenses. This funding was to be used to repay accounts from which funding was transferred to meet emergency firefighting needs pursuant to the authorities contained in sections 101 and 102 of the title I general provisions of the Interior and Related Agencies appropriation bill.

These sections include language which stipulates that all funds transferred pursuant to the sections must be replenished by a supplemental appropriation to be requested as promptly as possible. But, in addition to the $25 million, which was repaid, additional BIA program funding was transferred to meet emergency fire expenses for which no repayment has been requested.

So how much additional funding was transferred and what effect is that having on BIA programs?

Ms. RICHARDSON. The repayment, Senator, covered approximately 55 percent of the actual amounts transferred.

Senator REID. What plans does the Bureau have to address the repayment provision of the law?

Ms. RICHARDSON. Let me ask the Department to respond to this question.

Mr. ITTEILAG. Senator, Tony Itteilag, the Department's Budget Officer.

Right at the moment I have to tell you that we don't have any plans. This has been a matter that was discussed in the budget formulation process with the Office of Management and Budget and back and forth with the Secretary, and the final decision was that we would not request a supplemental for that part of the transfer which hasn't been repaid, which, incidentally is about $87 million on a Departmentwide basis.

So we have been asked by the House subcommittee if we intend to resubmit our supplemental request to the Office of Management and Budget. I have discussed this with the Secretary and he hasn't made a decision yet on whether or not we are going to do that, but the ultimate solution would be that either the administration will decide to request a supplemental and come forward to the Congress with it or that the Congress would have to on its own volition appropriate the remaining funds.

In the absence of that, we will continue to have a problem where we have significant funds that were transferred that are unpaid.

Senator **Reid**. Thank you.

COMMISSION ON INDIAN GAMING

The Commission on Indian Gaming was established as an independent regulatory authority within the Department of the Interior pursuant to the Indian Gaming Regulatory Act which is now a public law. Responsibilities of the Commission include the regulation and monitoring of class II gaming, such as bingo, conducted on Indian lands.

Your request for fiscal year 1990 funding for the Indian Gaming Commission, the law is already in effect, how is this law to be implemented prior to October 1 when the funding is not going to take place until after that?

Mr. **Ragsdale**. Well, currently the Bureau of Indian Affairs is still supervising the gaming activity operations under the current statute pursuant to section 10 of the Gaming Act. At the close of the previous administration the previous Assistant Secretary, Assistant Secretary Ross Swimmer had sought applications from throughout Indian country and from other sources for nominees to the Commission, and we have submitted a list of potential nominees to the Secretary's Office for determination.

Senator **Reid**. Does that include the Chairman also?

Mr. **Ragsdale**. Yes, sir.

Senator **Reid**. When do you expect the Secretary to submit those names to the President?

Mr. **Ragsdale**. My understanding is that the Secretary is considering that list of nominees at the current time. I don't have an estimate as to when he will make the nominations formal and proceed with the process.

Senator **Reid**. Do you know what the salary range of the Commission would be, the Chairman included?

Mr. **Ragsdale**. No, sir; I don't.

Mr. **Itteilag**. Senator, Executive Level IV I think is the Chairman, and the Vice Chairman would be Executive Level V. They are in that range. Then there is a general counsel position that's called for in the law, and that's a GS-18 position.

Senator **Reid**. I appreciate that. Where will the funds for the remainder of 1989 operations, from where will they come, because I think there should be more and the law should be implemented.

Mr. **Ragsdale**. We are currently administering the responsibility, and there are no new funds in fiscal year 1989. We are carrying out the responsibility. So there will be no new funds.

Senator **Reid**. Who is carrying out the responsibility specifically? Which "who"?

Mr. **Ragsdale**. The Bureau of Indian Affairs line officers.

Senator **Reid**. Who are they?

Mr. **Ragsdale**. Area directors, superintendents, and staff under those line officers.

Senator Reid. We've checked around and can't find anybody that has any responsibility for Indian gaming. Do you have names of people?

Mr. Ragsdale. Yes, sir; BIA and the Solicitor's Office are working with the Criminal Division of Justice and local U.S. attorneys to ensure compliance with the act. I'm not sure who you made your inquiry to with respect to——

Senator Reid. Well, Indian gaming is going on. Who is enforcing the law?

Mr. Ragsdale. Well, the contracts would have to be approved by the Secretary. That authority has been delegated to the Assistant Secretary who has in turn redelegated it to the area directors, the 12 area directors at the midlevel of management. So they have the responsibility to approve contracts related to gaming with Indian tribes.

Senator Reid. I'm sorry, now tell me who approves these contracts?

Mr. Ragsdale. Area directors.

Senator Reid. In your budget request you have lumped almost 75 percent of the requested funding into a catchall category. Can you supply more detail as to how this money will be spent?

Mr. Ragsdale. Yes.

Mr. Itteilag. Senator, let me comment on that. We prepared a budget for $2 million at the authorization level in the absence of any kind of specific information as to when the Commission would start operating, how it would operate, what kind of staff it would have other than what is called for in the law, which is a very limited number. So at the moment this is, I suppose one could say, a guess on our part, and we cannot provide additional detail at this time. That would have to wait until the Commission is duly appointed and they have a set of regulations which are required before they can begin their work and they decide how they are going to operate.

For the present though it's important that the budget be submitted at the authorization level, which is what we did.

Senator Reid. My direction would be that we should at least have a general idea relating to the funding, how much is for regulation and how much is for administration. I would hope that it would be heavy on the regulation. Having had some experience in gaming regulation in one of my former lives, I am very concerned about, you know, we pass the law and we need to know how it's going to work. Gaming can really get out of hand very quickly if it's not regulated. That was the reason that this legislation was passed, because we wanted to make sure that it didn't get out of hand, if in fact it already hadn't.

So I would hope that when the Commissioners are selected that there be some attention given to a breakdown as to regulation and administration. I can't give you a lot of wisdom about my experiences in most areas, but I can in this, and I would hope that there is a heavy emphasis on regulation.

Do we know what activities are now going on and is there somebody monitoring that? Are there statistics being kept? What's going on with Indian gaming?

Mr. **Ragsdale**. We maintain statistics insofar as the contracts that the Secretary actually approves at the local level under the——

Senator **Reid**. I'm sorry, how many contracts do you think have been approved?

Mr. **Ragsdale**. I would say at least, my guesstimate would be at least 100 since we have been in the business of approving bingo contracts and the like, Senator.

Senator **Reid**. I guess you have already answered the question as to whether the Commission will undertake any activities in 1989, and the answer is yes, if in fact, there are appointments made; is that true? And the money for that will have to be taken from some other part of your general budget.

Mr. **Ragsdale**. That's correct. If the Commission is formed and gets their operation scoped out, then we would have to absorb that somewhere within the Department's budget.

Senator **Reid**. The new Commission, as I understand it, there are only two staff positions. One of those staff positions is requested at the GS–18 level. Again, that is the attorney; is that true.

Mr. **Itteilag**. Yes.

Senator **Reid**. At this time do you know whether the Department intends to contract out many of the functions assigned to the Commission?

Mr. **Ragsdale**. No, sir; I don't think that there has been any kind of determination in that regard made until the Commission gets onboard.

Senator **Reid**. It's my understanding that you will as quickly as possible establish a fee system to address the operating costs of the Commission. Is that true?

Mr. **Ragsdale**. That's what I understand under the guidelines, yes, sir. The Commission sets the assessments not the BIA.

Senator **Reid**. Will Federal appropriations be necessary once the assessment of gaming activities is established?

Mr. **Ragsdale**. I'd like to provide that information for the record.

[The information follows:]

Indian Gaming Commission

There is an annual cap of $1.5 million with the authorization to match the $1.5 million with Federal moneys. Total: $3 million. The Commission cannot operate on $1.5 million.

Senator **Reid**. I interrupted you at one time. Is there anything further you wanted to say on this issue?

Mr. **Ragsdale**. No, sir.

EDUCATION

Senator **Reid**. In fiscal year 1989 for the first time the Bureau will factor summer school hours into the calculation for Indian student count which determines funding for the colleges.

Why now are you going to include summer school hours?

Mr. **Holman**. Senator, we have had a large increase in part-time students in these colleges.

Senator **Reid**. Will this proposal have any effect on individual colleges?

Mr. **Holman**. Not to my knowledge.

Senator **Reid**. Why should existing colleges have to forego part of their funding in order to accommodate new institutions?

Mr. **Holman**. New institutions?

Senator **Reid**. Yes.

Mr. **Holman**. I didn't understand the question, Senator.

Senator **Reid**. I will give you an example. I didn't mean to throw you that curve ball there and switch from one subject to the other. The Bay Mills Tribal College was approved in 1989 and will be funded for the first time in 1990, yet the Bureau has not requested additional funding.

Therefore, why should existing colleges have to forego part of their funding in order to accommodate new institutions?

Mr. **Holman**. Senator, I don't have the answer, but I can provide it for the record.

Senator **Reid**. The obvious answer is there probably isn't one and it's just that you're trying to do too much with a limited amount of money, but please try to supply something.

Mr. **Holman**. I will.

[The information follows:]

Funding for Colleges

Basic elementary and secondary education continues to be the Bureau's highest priority in education programs. Since there is no limitation placed on the number of colleges which can apply to be recognized under the Tribally Controlled Community College Act, the Bureau has no control over the number of colleges eligible for funding.

Eligible colleges receive grants based on course load of eligible Indian students, but they also have other funding sources. All of the colleges now charge tuition, and they are eligible for endowments from the Bureau. Five of the colleges also receive supplemental funding from their tribes within the tribe/agency portion of the budget.

Senator **Reid**. In addition to a new school being added, operating grants are proposed for a reduction of almost $700,000, $680,000. This reduction strikes me as flying in the face of two of the priorities of the new administration: No. 1, an emphasis on education and No. 2, a focus on investing in the future.

How can this obvious contradiction be reconciled?

Mr. **Holman**. Senator, these colleges out there have other sources of funding and they are also beginning to start to charge tuition, and students are eligible for various other Federal grants to seek higher education opportunities, and we are trying to get these colleges to avail themselves to apply for these other sources of funds.

SCHOLARSHIPS

Senator **Reid**. Again in 1990 the Bureau proposes to reduce funding for special higher education scholarships. Why does the Bureau propose this reduction again when you're aware not only of the statements of the Bush administration but also of the congressional support for this specific program, that is the special higher education scholarship fund?

Mr. **Holman**. It is my understanding, Senator, that we have been experiencing a decline in enrollment for these scholarships.

Senator **Reid**. And that would be the rationale then?

Mr. **Holman**. Yes, sir.

Senator **Reid**. Look into that more closely and see if in fact there are other reasons.

Mr. **Holman**. I will, sir.

[The information follows:]

SPECIAL HIGHER EDUCATION SCHOLARSHIPS

The Special Higher Education Program was established to provide support for graduate students in six fields of study identified by tribes as shortage categories. In fact, approximately one-third of the scholarship funds are provided to students in nonpriority fields. The decline in enrollment is in the priority fields; total scholarship applications have not declined. Students in nonpriority fields may also apply to their tribe for funding under the $28 million scholarship program which is part of tribe/agency operations.

Senator **Reid**. The budget justification indicates that unmet needs will be funded for a majority of eligible students in 1990.

Without being argumentative, how do you define "majority"? "* * * will be funded for a majority of eligible students in 1990." How do you define "majority"?

Mr. **Holman**. I have to defer on that one, Senator, too.

Senator **Reid**. I don't think majority is obvious. The standard meaning of "majority" I don't think fits here. You'll supply that information?

Mr. **Holman**. Yes, sir.

[The information follows:]

SCHOLARSHIPS

More than one-half of the applicants have received scholarships. However, many applicants are determined to be ineligible because of financial status, failure to apply for other sources of funding, incomplete applications, et cetera. Therefore the percentage of eligible applicants who receive scholarships would be much higher than 50 percent.

Senator **Reid**. For the record, what is the number of applications received and scholarships awarded by field of study for academic years 1987-88, and 1988-89? Does anyone have that, 1987-88 and 1988-89?

Mr. **Ragsdale**. We will have to provide that information for the record.

Senator **Reid**. You don't have it?

Mr. **Holman**. Not readily available.

[The information follows:]

NUMBER OF APPLICATIONS RECEIVED AND SCHOLARSHIPS AWARDED

Priority area	Received	Applicants	Denied	Scholarships awarded
Academic year 1987-88 and 1988 summer:				
Business	48	Late	34	22
Education	107	Ineligible	39	59
Engineering	4	Incomplete	50	1
Health	130	Other reasons	123	75
Law	145			103
Natural resources	1			
Nonpriority	84			13
Total	519		246	273

NUMBER OF APPLICATIONS RECEIVED AND SCHOLARSHIPS AWARDED—Continued

Priority area	Received	Applicants	Denied	Scholarships awarded
Academic year 1988–89:				
Business	32			28
Education	63			7
Engineering	7			7
Health	83			81
Law	103			98
Natural resources	1			1
Nonpriority	3			3
Total	292			278

TRIBAL COURTS

Senator **Reid**. Again looking at tribal courts, and I'm going to submit a number of questions on tribal courts.

One of the questions that I have is we now have in this country a National Judicial College which is located in Reno, NV, but it has now become world famous and people come from not only all over the United States, but all over the world to study here.

I would like in the written information that you give, because we have numerous written questions that you will be asked to respond to, I would like you to have someone give me reasons why the various tribal courts have not participated in these programs.

It would seem to me with the expertise they have there that this would be an ideal training ground. It's partially funded by Congress, it's well established and has been in existence for many years now and, as I've stated, people come from all over the United States, from municipal courts, justice courts, district courts, and Supreme Court Justices to study there, and I think it would be a real good training facility for those court personnel that are involved in Indian affairs.

So would you report to me on that.

Mr. **Ragsdale**. Yes, sir; I would be glad to.

[The information follows:]

National Judicial College

Over the years various tribal courts and court personnel have participated in the National Judicial College. These were court systems that had sufficient training moneys in their budgets to allow for such training. Not all tribal courts have training funds.

The per unit cost of training the Bureau offers the tribal courts through a master contract is considerably less than the cost of attending the National Judicial College. We do not discourage those tribal court systems that can afford the costs from participating in the National Judicial College. However, it is currently more cost effective to provide training through the National Indian Justice Center. The tribal courts are free to choose their training, subject to their own operating budgets.

ADDITIONAL COMMITTEE QUESTIONS

Senator **Reid**. Mr. Ragsdale, I really appreciate all your testimony. We have numerous questions that we are going to submit to you that we would appreciate a response as quickly as possible so that we can complete this record and move on to the actual appropriation process.

In addition to the questions that will be submitted by me, we have a number of other questions that Senators, McClure, Cochran, Domenici, and perhaps others have, and we would ask you to respond to those just as promptly as those that I'm going to submit to you.

Mr. RAGSDALE. Thank you, sir.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

Teacher Salaries

Question: Mr. Ragsdale, the FY 1990 budget request includes an increase of $4.6 million for salary adjustments for teachers and counselors, to bring their salaries more in line with public schools. This increase is partially offset by a decrease of $2.4 million predicated upon declining enrollment in Bureau-funded schools. The budget (p. 36) indicates that salaries will be brought in line with those paid by the Department of Defense. What assurances can you give the Subcommittee that additional funds for teacher salaries will, in fact, be spent on salaries, and not on other education program activities?

Answer: The salaries are set up by law and will be paid at Bureau-operated schools. While equal funding will be distributed to contract schools under the ISEP formula, these schools set their own salary rates and the Bureau can make no assurances.

Substance/Alcohol Abuse

Question: Within the education program, a reduction of $491,000 is proposed for school counselors who handle substance and alcohol abuse problems. The Bureau cites the shortage of credentialed counselors. The budget proposes that existing counselors and teachers pick up this function. Do you believe that the proposed pay raise will help alleviate this situation?

Answer: The anticipated pay raise has helped the morale of the entire education staff, and we expect it will help to cut down on the number of good teachers who leave the Bureau for higher paying jobs in local school districts. It is impossible to predict its specific impact on alcohol and drug abuse counselors, but we should be more competitive in the recruiting process.

Question: Is the shortage concentrated in some parts of the country more than others?

Answer: Nationally alcohol and drug abuse counselors are in short supply, and the shortage is especially acute on the Navajo reservation. There are very few counselors in the Bureau system who are certified as alcohol and drug abuse counselors; and to attain that status, the individual must receive specialized training at the university level.

Question: In total, how much has the Bureau spent on alcohol and drug abuse prevention in each of the last two years (FY 1988 and FY 1989)? How much is proposed for FY 1990? For the record, please provide a breakdown of funding for FY 1988-1990 by function, i.e., identification, crisis intervention, referral, follow-up, trafficking, interdiction and eradication.

Answer: Funds appropriated to the Bureau of Indian Affairs for drug and alcohol abuse activities are shown the following two pages. In addition, the Bureau receives a one percent set-aside from the Department of Education for drug and alcohol prevention activities which is to be used for local school-based education and prevention programs as described in Section 4125(a) of Title 20 U.S.C. Section 4625(a). The set aside for the Bureau for 1987 was $1,954,000; FY 1988, $2,226,512 and FY 1989, $3,475,000

INDIAN ALCOHOL AND SUBSTANCE ABUSE PREVENTION AND TREATMENT
ACT OF 1986 AND 1988 AMENDMENTS INFORMATION

Name	FY 87 Auth.	Appro.	FY 88 Auth.	Appro.	FY 89 (To date) Auth.	Appro.	FY 90 (Est.) Auth.	Appro.
Tribal Action Plans (authorized to 9/30/92)	1,000	1,000	1,000	0	1,000	0	1,000	0
Indian Education Programs - Summer Youth Programs (authorized to 9/30/92)	5,000	0	5,000	0	5,000	0	5,000	0

INDIAN ALCOHOL AND SUBSTANCE ABUSE PREVENTION AND TREATMENT ACT OF 1986 AND 1988 AMENDMENTS INFORMATION

Name	FY 87		FY 88		FY 89 (To date)		FY 90 (Est.)	
	Auth.	Appro.	Auth.	Appro.	Auth.	Appro.	Auth.	Appro.
Indian Education Programs - Substance/ Alcohol Abuse Counselors	0	2,400	0	2,400	0	2,391	0	1,913
Indian Education Programs - Curriculum Development & Materials	0	3,000	0	0	0	0	0	0
Emergency Shelters and Halfway Houses - staffing & operation (authorized to 9/30/90)*	3,000	0	3,000	0	3,000	0	3,000	1,000
Emergency Shelters and Halfway Houses - construction (authorized to 9/30/92)	5,000	5,000	5,000	0	5,000	0	3,000	0
Illegal Narcotics Trafficking - Tohono O'odham (authorized to 9/30/92)	500	500	500	500	500	250	500	250
Illegal Narcotics Trafficking - St. Regis (authorized to 9/30/90)	0	0	0	0	450	0	450	0
Illegal Narcotics Trafficking - Marijuana Eradication (authorized to 9/30/92)	0	1,000	0	0	500	0	500	0**
Law Enforcement and Judicial Training (authorized to 9/30/92)	1,500	1,600	1,500	1,300	1,500	1,298	1,500	1,335
Juvenile Detention Centers - staffing & operation (authorized to 9/30/90)*	5,000	100	5,000	0	5,000	0	5,000	3,000
Juvenile Detention Centers - construction (authorized to 9/30/91)	10,000	7,500	10,000	0	10,000	0	5,000	0
Office of Alcohol and Substance Abuse	0	500	0	250	0	250	0	251
Total	31,000	22,600	31,000	4,450	31,950	4,189	24,950	7,749

* Future funding authorized under Snyder Act authority.

** Funds for marijuana eradication included in Law Enforcement and Judicial Training in FY 90 (Est.)

Question: How much of this program funding is spent by the Bureau? By the tribes?

Answer: Tribes must have a Tribal Action Plan before they can contract for any of the funds in substance abuse. The amount of dollars in Tribal contracts is not readily available.

Question: What are the levels of Bureau and tribal personnel devoted to these efforts?

Answer: The Bureau education office is in the process of selecting personnel to work only on substance abuse programs. The Bureau's Social Services, Law Enforcement and Tribal Services branches also have personnel committed to this effort. The education office has had dialogue with Indian Health and the American Red Cross to address the needs of this program.

Question: Under Special Law Enforcement, an increase of $300,000 is requested for supplies, materials, and equipment to assist in the fight against illegal narcotics. Would you provide more detail as to how these funds will be used?

Answer: The bureau plans to purchase needed high technology equipment and supplies which would be available for special operations at the local level. This will enable local law enforcement programs that cannot purchase this equipment to have access to such equipment. This funding could also be used to assist local programs to purchase evidence in undercover cases.

Question: How does this special law enforcement funding fit in with the other anti-drug activities of the Bureau?

Answer: The special law enforcement funding enables the bureau to expand investigation and prosecution of narcotic violators at the local level.

Question: What relationship, if any, is there between special law enforcement and the Marijuana Eradication and Reconnaissance Team (MERT)?

Answer: Special Law Enforcement is an activity that was established to assist the Bureau with unexpected law enforcement needs. The MERT is an operating program which concentrates on the training of special officers and the eradication of illegal narcotics in Indian country. The MERT are highly trained police officers and are available to assist the Bureau or tribal police in high risk situations.

Question: When was MERT established?

Answer: The MERT was established in 1986. A copy of the "History of the Marijuana Eradication and Reconnaissance Team", has been provided for the Committee's files.

Question: What level of funding will you provide for MERT in fiscal years 1989 and 1990?

Answer: Current year funding is $998,000, and $1,335,000 is requested for FY 1990.

Question: For the record, would you provide the Subcommittee with estimates of the eradications which will be accomplished by MERT?

Answer: For FY 1990, the bureau proposes an increase of $241,000, for increased overflight hours. The additional hours will enable MERT to broaden eradication overflights to Indian country located in the States of Nevada, Oklahoma, North Dakota, South Dakota, Wyoming, North Carolina, Florida, Arizona, and New Mexico. Estimated eradication is as follows:

74,100	Regular Marijuana Plants
13,300	Sinsemilla Marijuana Plants *
87,400	Total Marijuana Plants Eradicated

* Sinsemilla is a more potent variety of marijuana plant and is ten times more valuable.

Question: As an internal transfer, the Bureau is proposing to merge the Substance/Alcohol Abuse training component of the Tribal Courts program ($300,000) with the Judicial Services Center. Why is this transfer proposed?

Answer: The Judicial Services Center will serve as the office responsible for coordination of all training activities for the Branch of Judicial Services, therefore, it is appropriate to merge such training activities.

Question: What benefits do you foresee due to the transfer?

Answer: Utilizing the Judicial Services Center as the primary conduit for all tribal court training ensures uniformity of training, expenditures responsive to training needs, and efficient utilization and coordination of training resources.

Law Enforcement

Question: What was the basis for funding some of the FY 1989 increases in FY 1990, but not others?

Answer: Those increases provided for tribe/agency law enforcement associated with state retrocession have been continued. Increases to expand existing programs were not included since the funding level within requested funding is established by the individual tribes and reflect their priorities.

Water Rights Settlements

Question: What plans does the Bureau have for meeting the remaining requirements, not only for FY 1990, but also for the outyears?

Answer: The Budget Agreement did not specifically address Indian water settlements, however, the House of Representatives' Concurrent Resolution on the Budget assumed additional funding for the three authorized Indian water rights settlements.

Question: Has a comprehensive strategy for dealing with these, and future, settlements been formulated within the Administration?

Answer: The Administration expects to continue to work toward settlement of legitimate Indian wate rights claims to which the Federal Government is a party. To this end, the Administration is committed to establishing criteria and procedures to guide future Indian water claim settlement negotiations, including provision for Administration participation in such negotiations.

Question: Your prepared statement indicates that FY 1990 funding for these settlements will total $113 million. Why is this estimate different from the $97 million estimate previously announced?

Answer: The difference is the preconstruction cost ($16 million) of the Animas-LaPlata project. this project is part of the Colorado Ute Indian water settlement (P.L. 100-585).

Tribally Designed Budget Initiative

Question: In FY 1988, Congress initiated a planning process for which the participating tribes would develop budgets using funds received from BIA in all the various program areas. An additional $1.2 million was appropriated in FY 1989 to continue this effort. Have any budget proposals been submitted?

Answer: No budget proposals have been submitted by the participating tribes.

Question: When do you expect to receive a proposal that could be incorporated into the budget?

Answer: Some of the first ten tribes have indicated that they may be submitting a proposal for a tribally designed budget for FY 1990.

Question: Have tribes expressed a need for additional planning money in FY 1990? In your estimation, when would these budgets likely be ready to be implemented?

Answer: Yes, representatives of the first ten tribes stated a need for planning funds for FY 1990 in a meeting held on January 12, 1989. Two or three such budgets may be ready for implementation in FY 1990, perhaps starting in January of 1990.

Firefighting

Question: In FY 1989, the Congress appropriated $25 million to the Bureau to fund emergency firefighting expenses incurred during FY 1988. This funding was to be used to repay accounts from which funding was transferred to meet emergency firefighting needs, pursuant to the authorities contained in Sections 101 and 102 of the Title I General Provisions of the Interior and Related Agencies Appropriation Bill.

These sections include language which stipulates that all funds transferred pursuant to the Sections must be replenished by a supplemental appropriation, to be requested as promptly as possible. But, in addition to the $25 million, which was repaid, additional BIA program funding was transferred to meet emergency fire expenses, for which no repayment has been requested.

Did the Bureau make a request to the Department to replenish these funds? Did the Department send a request to OMB?

Answer: The Bureau identified for the Department its needs to cover fire costs in 1989. The Secretary authorized transfers for all affected bureaus. Immediately after authorization of the transfers the Department wrote to the Director of OMB notifying him of the transfers and requesting supplemental appropriations under the terms of Section 102.

Question: In FY 1990, the Administration proposes a new permanent, indefinite appropriation account, from which allotments will be made to the various land-managing agencies, to meet anticipated firefighting expenses. BIA's FY 1990 allocation from the account would be $31.2 million, to be spent on fire management, presuppression, suppression, and emergency rehabilitation. How much funding will be allocated for each of these activities?

Answer: The BIA will distribute the requested $31.2 million as follows:

Fire Management:	$ 5.4 million
Presuppression:	16.3 million **
Suppression:	8.0 million
Emergency Rehabilitation:	1.5 million

** The proposed presuppression allocation includes $2 million in badly needed funds for the acquisition of capitalized fire equipment. We presently have a need for approximately $7 million and propose to fund this need over the next 3 fiscal years at which point capitalized equipment funding would drop to a maintenance level of $.7 to 1 million per year.

Question: Are fire management activities charged to the firefighting account under the current funding mechanism? At what level?

Answer: Yes. A portion of the costs categorized as Fire Management are charged to the firefighting account under the current funding mechanism. For FY 1988, an estimated 60 percent of the costs for this category were funded from the firefighting account.

National Indian Gaming Commission

Question: The Commission was established as an independent regulatory authority within the Department of the Interior pursuant to the Indian Gaming Regulatory Act (P.L. 100-497). Responsibilities of the Commission include the regulation and monitoring of Class II gaming (such as bingo) conducted on Indian lands. Please provide more detail regarding the $1.4 million proposed for contracts and other services.

Answer: We cannot be more specific at this time. Following the appointment of the Commission, the drafting of regulations, and the hiring of staff, the Department will be better able to respond.

Federal Acknowledgement

Question: The budget justification indicates that there are approximately 230 unrecognized Indian groups in the Nation, of which 114 have formally petitioned the Bureau for recognition. How long ago was the first of these 114 received?

Answer: When the current acknowledgment process was established in 1978, there were 40 petitions on file. The first group to submit the documentation in response to the specific criteria in 25 CFR 83, was ready for active consideration in 1979.

Question: Of the 114 petitions, I understand that 24 have been evaluated, 30 are in process, and 60 require additional supporting material. What is your timeframe for addressing these positions?

Answer: Petitions are processed in the order in which they are submitted if documentation is received to support their letter petitions. Currently, groups are submitting documentation faster than we can process it.

Question: What are you doing to expedite the process?

Answer: We are attempting to contract out some of the case specific work in order to speed the process. We are examining the feasibility of referring any appeals of final determinations of acknowledgment to the Office of Hearings and Appeals. We will be issuing revised and extended guidelines for the improved preparation of petitions to reduce Bureau processing time. We are also considering establishment of deadlines for submissions of requests for acknowledgment and for submission of documented petitions.

Question: What is the next step for the 24 which have been evaluated? Have these groups been informed of their status?

Answer: Yes, all 24 groups which have been evaluated have been informed of their status. The procedures which govern the Acknowledgment process, 25 CFR 83, provide that all proposed and final determinations be published in the Federal Register within 60 days from the expiration of the comment period. The groups are also notified directly in writing regarding the determination. If a group is acknowledged, the regulations also require the Bureau area office to develop in cooperation with the group, and forward to the Assistant Secretary, a determination of needs and a recommended budget required to serve the newly acknowledged tribe. The FY 1990 budget proposes a $445,000 increase to help eliminate the backlog. Contracting is expected to expedite the process.

Question: How will contracting expedite the process?

Answer: Contractor work will be limited to the technical research which is necessary to document specific petitions, thus saving Bureau staff from performing these time consuming tasks. The Bureau staff will then be available to perform other tasks such as developing recommendations for or against acknowledgement for decision by the Assistant Secretary - Indian Affairs as well as providing technical assistance to petitioners, evaluating appeals, responding to inquiries, and numerous other program requirements.

Question: How much of the backlog do you expect to address with the additional funding?

Answer: With the current request of $445,00, we can hire at least two more research teams. With two additional teams we can complete an average of four additional cases per year and eliminate the backlog in 7-1/2 years. Our current contractor is estimating that it would cost approximately $140,000 to complete the technical research per case.

Question: Do you have an estimate of when the backlog will be eliminated?

Answer: If contracting proves successful, the backlog could be eliminated by 1994.

Employee Housing

Question: BIA manages nearly 4,500 units of employee housing, of which approximately 3,400 require rehabilitation. A $500,000 pilot program to address repair needs for BIA employee housing is proposed in the FY 1990 budget. Approximately 34% of these units are classified as poor or obsolete. What is the condition of BIA housing compared to other bureaus in the Interior Department?

Answer: According to a study done by the Office of Policy Analysis in 1987, 34% of BIA's housing is in poor or obsolete condition and about 4% for other bureaus in the Department. An internal survey done by National Park Service reports that 10.5% of their housing in in poor or obsolete condition, but about half of their housing is seasonal and consists of tents, trailers, etc.

Question: What are the estimated costs to address BIA's housing needs?

Answer: Based on figures in the study mentioned above, the estimated cost for rehabilitation is $25 million to $29 million, and $2 million to $5 million for new construction if replacement is appropriate. A needs assessment identifying the total number of units needed will be done, then rehabilitation and repair will be done to only those units that are identified as required housing.

Question: How does the BIA plan to meet these needs in the future?

Answer: By developing a multi-year housing strategy to bring required employee housing up to good condition. This strategy includes three steps: first, conduct a needs assessment to determine what employee housing is required and to dispose of the excess (through transfer, sale, or demolition); second, to inventory, under contract, the conditions and corrections needed to bring the required housing up to acceptable condition; and third, to undertake a renovation program based on the specifications developed in the second step.

Question: The funds requested in the budget are proposed for investigations, evaluations, and analyses. How long do you forecast it will take to accomplish the necessary studies, evaluations, and analyses?

Answer: If funds are appropriated in FY 1990, a contract can be let to do an independent study on or around October 1, 1989. Preliminary work is underway within OCM, BIA, and other Departmental bureaus to prepare draft contract documents. It is estimated that the contract would not exceed one year.

Question: Have these sorts of studies been done before? If not, how did you arrive at the estimate of 3,400 units requiring rehabilitation?

Answer: No. An in-house analysis of employee housing, done by the Office of Policy Analysis in 1987, indicated that a large portion of the housing was in need of major renovation or needed to be excessed or demolished. However, individual location reviews were not included in this evaluation nor were other site specific options considered. The housing data used in the overview provided by the Office of Policy Analysis were based on records of the Department's housing portfolio, maintained by the WBR's Denver Survey Team.

Question: When will actual repair and rehabilitation get underway?

Answer: Repairs and rehabilitation can get underway following completion of a needs assessment, to the extent that funds are available. This is estimated to be October 1, 1991. However, where location assessments indicate that disposition actions should take place earlier, these could be initiated. Also, certain repair activities, if critical, would be initiated immediately on a case-by-case basis.

Tribally Controlled Community Colleges

Question: In FY 1989, for the first time, the Bureau will factor summer school hours into the calculation for Indian student count, which determines funding for the colleges. What effect do you foresee this proposal having on the individual colleges?

Answer: For FY 1989, the Indian Student Count generated by nine colleges which had summer school represented approximately 7% of the total estimated ISC for Title I colleges.

Question: Were the tribes and colleges consulted on this decision?

Answer: The inclusion of summer school hours is directed in the authorizing legislation. There has been extensive consultation on the draft regulations which describe the ISC calculation process.

Question: Will this proposal penalize schools that might not have a large summer student enrollment, because their students work during the summer?

Answer: The operation of a summer school will assist colleges in generating ISC, and may in the long run penalize colleges without summer school programs.

Question: Funding for endowment grants for the Tribally Controlled Community Colleges was initiated in FY 1988. Endowment funds are distributed based on matching funds committed. Interest on these grants can be used to defray expenditures associated with operation of the college. A reduction of $250,000 is proposed for this program in FY 1990. Some schools have achieved great success in raising funds--over one-half of the FY 1988 funding went to just two schools. To what do you attribute this?

Answer: The endowment funds were distributed prorata to the colleges which submitted applications by the established date indicating the matching funds they had raised. In FY 1989, the colleges asked that they each have an equal piece of the endowment set aside. If a college is unable to raise a matching contribution, their portion of the total will be made available to all other colleges which have raised funds in excess of their own portion.

Question: For the record, please provide a listing of tribal college funding, by institution, in FY 1988 and 1989, and the estimate for FY 1990.

Answer: The following chart shows actual grant distributions for FY 1988 and FY 1989. Since FY 1990 grants will be based on enrollment next school year, no estimates by school are available.

Tribally Controlled Community Colleges
Grant Distribution

	FY 1988	FY 1989
Blackfeet Community College	$567,820	$570,085
Cheyenne Community College	131,700	130,149
D-Q University	261,230	228,349
Dull Knife Community College	250,440	304,945
Fond du Lac Community College	--	198,889
Ft. Belknap Community College	246,120	242,097
Ft. Berthold Community College	248,280	255,845
Ft. Peck Community College	388,620	369,757
Lac Courte Oreilles Community College	293,610	302,981
Little Big Horn Community College	215,900	342,261
Little Hoop Community College	185,670	196,925
Northwest Indian College (formerly Lummi)	524,630	668,185
Nebraska Community College	284,980	196,937
Oglala Lakota Community College	1,532,890	1,436,209
Salish Kootenai Community College	738,370	711,493
Sinte Gleska Community College	682,240	707,565
Sisseton-Wahpeton Community College	174,870	214,601
Standing Rock Community College	522,470	522,949
Stone Child Community College	291,460	265,665
Turtle Mt. Community College	647,700	623,113
Subtotal Title I Colleges	$8,189,000	$8,489,000
Navajo Community College	4,063,000	4,113,000
Technical Assistance (added equally to grants for both Title I colleges and Navajo Community College)	116,000	116,000
TOTAL	$12,368,000	$12,718,000

Question: Are you taking any steps to share the experience of some of these schools with the others?

Answer: The colleges meet several times a year and have had speakers who offered information about the process of getting funding from private foundations, corporations, and others. The Bureau has not taken any steps to collect this information and disseminate it to the colleges.

Question: What was the total interest generated on the FY 1988 endowment grants?

Answer: For FY 1988, the endowment grants earned approximately $80,922 in interest. At this time, the collection of information on this item is incomplete, as colleges are still in the process of completing their annual reports.

Institutionalized Handicapped Students

Question: Within the Education program, the Bureau provides financial support for the educational costs of handicapped Indian children who are placed in institutions, either state-operated; private, non-profit; or facilities operated by Navajo tribal organizations. On average, 200 children are served. Mr. Ragsdale, the budget indicates that funds for these children will be transferred from social services to education for the purpose of reducing the contracting process. How does such a transfer reduce the contracting process?

Answer: The funds to be transferred from the BIA Social services to the Office of Indian Education Programs and the contracting procedures to be changed cover only the three tribally operated institutional programs on the Navajo Reservation. Currently, the BIA Social Services staff contracts with the Navajo Division of Child Welfare for living care costs, which is then subcontracted to the three programs. The Office of Indian Education Programs contracts with each institution for education costs. Indirect cost funds are paid for each contract. Different negotiation is required for each contract, and the negotiation is often hampered by the contractor being confused as to which program has financial responsibility for which services.

With the merger of both programs under OIEP, one scope of work and contract can be written for the entire education/residential program. The OIEP will be able to monitor, review and provide technical assistance to the entire program. Having one contact will allow better fiscal management at the contract site and assure no duplication of expenditures.

Question: Why do the two programs have different contracting processes. Can the simplified contracting you prescribe to the education program be used in other BIA programs?

Answer: The OIEP is attempting to improve services and reduce the amount of time on contracting by lessening the total process for the Institutions and the Tribe. This change in procedures and negotiation means less effort and paperwork for the Tribe and schools. The contracting process is the same for each contract, but each contract provides funds for different purposes. Contract compliance monitoring must be accomplished by each program contractor.

Question: For the record, please provide a breakout of the numbers of students served in each of the categories, for fiscal years 1988-1990.

Answer:

	Number of Students		
Handicapping Condition	1988	1989	1990
Specific Learning Disabled	36	30	28
Multi-Handicapped	33	36	36
Trainable Mentally Retarded	1		1
Mentally Retarded	31	67	67
Emotionally Disturbed	10	22	33
Orthopedically Impaired	4	3	3
Deaf	22	25	25
Blind	10	11	11
TOTAL	147	197	204

Social Services

Question: The budget indicates that Social Services program oversight, at the regional level, will increase due to additional workload associated with, (1) joint BIA/IHS initiatives in child welfare, drug and alcohol abuse, and pregnancy prevention, and (2) increased involvement in protective services for children. However, no additional funding or staffing have been requested. Is it realistic to expect that existing regional staff can adequately address these important initiatives?

Answer: With the FY 1989 allotment of $1.5 million of "enhanced child welfare" funds to Areas and Agencies, these duties are now adequately handled with this extra staff. The program oversight and compliance function will be the responsibility of the existing Quality Control Unit which is currently operated in Central Office.

Question: Your opening statement references a joint BIA/IHS oversight committee to promote the protection of Indian children. Will additional dollars and personnel be assigned to this committee?

Answer: The BIA/IHS National Oversight Committee for Child Protection is an advisory, inter-agency committee formed with the approval of the Assistant Secretary - Indian Affairs. This committee has no specific dollars identified for operating expenses and is composed of thirteen (13) individuals representing various professional disciplines within the BIA and the IHS; each serves as a conduit to their respective programs. One individual, representing Social Services and who has additional duties within this office, has been assigned to work with this committee.

Question: Does the Committee have a plan of action for FY 1989?

Answer: In order to enhance child protective services, the committee has coordinated and worked with other Federal offices in an effort to strengthen the multi-disciplinary approach. Moreover, the committee plans to conduct several national reviews of local and Area Child Protection Teams. These areas include but are not limited to Billings Area, Navajo Area and Aberdeen Area.

The committee also plans to assist in implementation of regional training sessions for Tribal leaders, Tribal Court and Social Services personnel. The first regional training session for Tribal leaders is scheduled for April and will be held in Albuquerque. An additional effort is developing and implementing policy directives relating to personnel procedures for new and existing Bureau employees.

Question: Will the Committee be continued in FY 1990?

Answer: Yes. Since child protective services is an increasingly critical factor impacting Indian children and families, the committee members recognize the continued need for advising and coordinating with existing Child Protection Teams. The committee is a viable mechanism for promoting and strengthening existing policy direction and legislative mandates between BIA and IHS.

Question: The Tribal Work Experience Program (TWEP) provides assistance to tribal members who work on tribal projects. The average payment is $55 per month. Do all tribes have a work experience program?

Answer: No, not all tribes operate a TWEP program.

Question: Is there a statutory limit on the funding which can be provided to TWEP participants?

Answer: No. The only authority for TWEP rests in 66 BIAM Sec. 5.9 and 25 CFR Part 20.1(ee).

Question: Are there other limitations?

Answer: The other limitations are based on availability of funds.

Question: How many persons received assistance under this program in fiscal years 1988 and 1989?

Answer: The estimated number of TWEP participants shown in the FY 1990 justification (4,300 per month) was based on actual obligations recorded in the financial system against the program element for the TWEP program. The total obligations were divided by $55 per month per participant and divided by 12 months. The Social Services programs in the field believe this number is low and every effort will be made to assure accurate input of obligations at the local level.

Question: Are there other eligible individuals who have not received funding because of budgetary limitations? How many?

Answer: Funding was not a limitation in the welfare assistance program in FY 1989.

EARN Demonstration Project

Question: The Employment Assistance Readiness Net (EARN) was established in FY 1988 as a three-year, community-based demonstration project to provide an opportunity for sustained and meaningful work, and development of job skills for tribal members. What has been the experience, to date, with the six projects selected?

Answer: The six projects received allotments in August, 1988, and spent the first quarter of FY 1989 advertising and recruiting staff, acquiring supplies, attending meetings with BIA Social Service and contract officials at the various areas where they are located. Performance and production of results began in the second quarter of FY 1989, so very little experience is available from which to draw conclusions or report progress to date.

Question: What types of projects are being developed? Where?

Answer: Projects are located in the Muskogee, Eastern, Aberdeen, Albuquerque, Phoenix, and Portland Areas. The types of projects developed generally focus on job development and individual employability by utilizing such resources as social support services, remedial education, vocational counseling, job training and incentives. Each project also contains a methodology to empirically test the effectiveness of the proposed model with means of corrective action, if indicated.

Question: Is it realistic to expect that results will be available at the end of FY 1990, which can be used by other tribes?

Answer: There will be one year of results available by September, 1990, from which to draw preliminary conclusions. It is unlikely that these results will prove useful to other tribes at such an early date in the project time frame. Results after three years will be more useful and valid for other tribes to draw on for program enhancement.

Question: How does the Bureau intend to integrate the EARN program experience into the welfare assistance program?

Answer: The Bureau has consistently said that the EARN demonstration projects will be utilized to develop a framework through which tribes can develop develop local stategies to reduce welfare dependency and promote self sufficiency.

Detention Facilities

Question: In FY 1988, the Office of Construction Management contracted with the National Academy of Pubic Administration (NAPA) to review Bureau-funded detention centers. Please summarize for the Committee the findings of the NAPA review.

Answer: The NAPA recommendations include the following:

Adopt New Generation Jail Designs. "New Generation" is a term used by corrections officials to refer to a different approach to designing and managing jails. BIA is adopting this concept in its planning for new facilities at Eagle Butte and Ft. Peck. The NAPA study team felt BIA should adopt the New Generation concepts in all renovation and new construction projects.

Given the breadth of the problems identified in this survey and the realities about how much improvement could be effected in a year or two, NAPA did not recommend remodeling detention centers as a solution. However, it recommended that all future jail renovation and construction efforts follow the contemporary "New Generation" design concepts. These concepts rely on continuous visual supervision of inmates and a normalized atmosphere in jail. This approach has been found, in many communities, to be economical in terms of human and dollar resources. The "New Generation" approach is endorsed by the National Institute of Corrections.

Develop Area Facility Demonstration Sites. NAPA recommended that in four or five areas where there are the most BIA facilities, the Bureau use as a training or demonstration site one of the better operated and maintained jails. Such jails could be used to demonstrate to other BIA and Tribal managers what can be achieved with improved management, consistent attention to routine maintenance, and better inmate supervision, including incentives to condition inmate behavior.

Reorientation Toward Detoxification and Treatment. NAPA recommended that the management of Indian jails be directed from a security or detention orientation toward a more authentic detoxification and treatment orientation. Such reorientation would recognize the real nature of most inmates' problems and, over the long term, encourage successful treatment at the reservation level.

NAPA's observers returned from their site visits with the strong conviction that the present focus on security is an inadequate response to the alcohol problem on Indian reservations. NAPA recognized that resources would not permit medical detoxification of all alcoholic inmates nor their sentencing to treatment at rehabilitation centers. However, just as some well-maintained jails in New Generation concepts could be established, NAPA believes that model detoxification and treatment programs, with specially trained detention staff members, could be established at a limited number of locations. Further, as the Bureau and Indian Health Service (IHS) and Tribal Councils move closer toward offering treatment at all reservations, local detention staff members trained at the demonstration facilities would be better prepared to support these broader efforts. The programs NAPA suggested would require more training of law enforcement staff members in proper detoxification procedures. Any such program would also require the local IHS facility to commit staff time to providing the necessary medical supervision and support.

Enhance Management Capabilities. The detention facilities management capabilities need to be enhanced in terms of discipline, consistency, accountability, and training.

Priority Attention to Health and Safety Deficiencies. Immediate attention is required to correct many health and safety concerns identified in the site reports. The fire safety deficiencies should receive top priority.

Enforce Public Law 93-638 Agreements. The NAPA report recognized that Public Law 93-638 agreements providing self-determination reflect public policy in Indian affairs. However, visits at some Tribal jails and review of Public Law 93-638 documents at the reservation level convinced NAPA observers that the Bureau must move toward more stringent administration of these agreements. (Many of the same problems witnessed by Academy observers in Tribal facilities also appeared in jails run by BIA.)

Consider Local Maintenance Records in Approving New Construction. Even where clearly established needs for new construction exist, it is important that the Bureau review the Agency's and Tribe's record in maintaining existing facilities. Appropriations for new facilities should not be granted where there is little likelihood that the facilities will be operated and maintained adequately.

Improve Budget Coordination, Policies, and Inspections. The NAPA study team recommended the following measures:

- All appropriation requests for new facilities and major renovation should address both staffing and maintenance requirements for the facility.

- Publish Bureauwide detention policy and procedural guidance for reservation jail use after securing the views of reservation law enforcement officials.

- Institute annual maintenance inspections by Area Office staff, with emphasis on health and safety. Assure appropriate follow-up on deficiencies.

Question: Has, or will, a priority list for detention facilities be established?

Answer: BIA recently reviewed and ranked applications submitted under the Planning of New Institutions Program (PONI). The rankings will be published in the Federal Register shortly. This will establish a priority list for addressing reservation detention needs.

Question: Are new or replacement facilities necessary at any locations?

Answer: The purpose of the PONI program is to determine the specific detention needs and how those needs can be addressed. Additionally, OCM is considering contracting with the National Academy of Public Administration to determine options for meeting detention needs, including options for alternate housing where these alternatives could provide more effective and more cost-efficient programs.

New School Construction

Question: Please explain for the Committee the ranking of the Couer d'Alene Tribal School and its subsequent removal from the FY 1990 construction list.

Answer: In March 1988, when the original FY 1990 ranking was developed, the application materials submitted by the Tribal entities were evaluated based on established ranking criteria. The findings of the New School Construction Evaluation Committee were that Coeur d'Alene School had the second highest percentage of unhoused students. Therefore, this percentage of unhoused students represented a high priority consideration for additional educational space. However, just prior to the budget submission, conflicting figures for the Coeur d'Alene School's current and projected enrollment surfaced as well as conflicting reports regarding seats available at nearby public schools. Consequently, Coeur d'Alene was removed from the FY 1990 ranking list pending completion of a contract validation study. This contract validation study is underway, with a final report due in early May. This study will deal with enrollment data. Based on the validation study, a final recommendation on new construction at Coeur d'Alene School can be made.

Question: What is the status of the re-evaluation?

Answer: Site validation studies are required of all top-ranking new school construction projects prior to final consideration for funding. The site validation study of the Coeur d'Alene School was not completed at the time of the final FY 1990 budget submission. The validation study is currently being conducted, and the results should be available in early July.

Because of the problems with the FY 1990 New Construction List, validation studies will be performed earlier in the fiscal year so that fully validated projects can be submitted to Congress with future fiscal year budget requests.

Question: At what level was the application prepared? Reviewed?

Answer: The application was prepared primarily by the Coeur d'Alene Tribal School, with supporting resolutions from the Coeur d'Alene Tribal Council and the Coeur d'Alene Tribal School Board. All Tribal entities submitting applications are encouraged to coordinate any application materials and requirements with their Agency or Area Education Officer prior to application submittal.

A New School Construction Evaluation Committee comprised of senior education and facilities operations staff reviewed all applications submitted. The

Committee then made recommendations as to those applications qualifying for ranking and reservation detention needs.

Facilities Management

Question: An increase of $360,000 is requested to fund positions associated with the reorganization of the Facilities Management Office, which has already occurred. Why weren't the dollars transferred when the positions were moved?

Answer: Nine positions were transferred from the Facility Management Construction Center to Area Offices. Funds were not transferred at the same time because of the lag time needed to recruit and fill the Area Office positions.

Question: If the dollars weren't transferred, what functions are being conducted with the dollars provided previously to support the positions?

Answer: In the period after the reorganization, costs associated with pay increases and staffing of key positions at FMCC have been funded with the dollars associated with the transferred positions.

Question: An increase of $510,000 is requested to begin the first phase of a comprehensive inventory of BIA-owned utility systems. What is the estimated cost to complete this inventory?

Answer: For clarification, the $510,000 is a transfer (not an increase) to cover the costs associated with the +6 FTE for Environmental staff to administer BIA Facilities environmental contracts and environmental management programs. The inventory/audit will use an estimated $1.4 million.

Question: How long will it take to compile the inventory?

Answer: The inventory will take approximately two years.

Question: How does BIA plan to use the information gathered?

Answer: The data will be compiled in a commercially available, IBM compatible data base, which is capable of being linked to the EPA's A-106 data base and to the Bureau's facilities MIS (FACCOM) system. This will provide the Bureau with the following capability:

1. Knowing the current status of the compliance of all federally owned BIA facilities with environmental laws and working toward the national goal of full environmental compliance of Federal facilities.

2. Facilitating the inclusion of all needed environmental projects into the A-106 process.

3. Prioritizing the project needs for necessary repair activities and for coordination with efforts to privatize utility systems.

4. Making any needed changes in Operations and Maintenance programs to assure continued compliance.

5. Reducing the potential for liability resulting from civil suit.

6. Training facilities staff on environmental subjects.

Water Resources

Question: The Bureau proposes to transfer $6,853,000 from Trust Responsibilities (Water Rights Negotiation/Litigation) to the Water Management and Development aspect of the Natural Resources program. For what reason has BIA proposed this transfer?

Answer: The BIA proposes this transfer to emphasize the programmatic relationship between protection of Indian water rights and the management and development of those resources while they are being adjudicated, negotiated, and used. The President's budget proposes a parity in funding of water rights litigation/negotiation and management/development. As noted in past fiscal years, development of Indian water rights claims directly benefits tribes given the vast amount of technical data, both baseline and use specific, which is developed to advance federally reserved water rights claims. Such information is directly applicable to tribal water management and development activities of reservations, as well as regions studied. A lack of understanding about the inter-relationship between protection, management and development led to inadequate funding for the negotiation/litigation program in FY 1988.

Question: What is the policy behind the transfer from Trust Responsibilities?

Answer: It is the Bureau's policy to protect federally reserved Indian water rights, while making an effort to advance water management and development projects for tribes whose rights are currently the subject of settlement, as well as those tribes whose rights are currently not at issue. We endeavor to conduct these activities within budgetary constraints without jeopardizing the loss of the water rights or the use of available water resources. This comports with our responsibility as trustees and as a federal agency.

Question: Isn't the water rights negotiation and litigation function properly categorized as a trust function?

Answer: It could be characterized as such, but is not essential. This is demonstrated by the President's budget, in which protection is also accomplished through management and development where water rights are not the immediate subject of litigation or negotiations, e.g. comprehensive management planning for co-management of water resources among tribes and non-Indian water users. In this example, controversy of the nature of water rights can be avoided when Indian and non-Indian water managers can agree on management strategies for mutual beneficial use of available water supplies.

Question: On what grounds does the Bureau now consider this proposal only to be an internal transfer, whereas in FY 1989, the same transfer was proposed in the normal programmatic changes from the base budget?

Answer: In FY 1989, the Bureau proposed to transfer Water Resources Management and Development funding at a level of $7.5 million to Water Rights Negotiation/Litigation. This was based on the rationale that tribes in negotiation/litigation would directly benefit from the use of data and evidence developed for water rights claims. This approach was flawed by the fact that tribes who were not in negotiation/litigation activities received less funding, thus the potential for avoidance of controversy through tribal management and development was sometimes missed. We believe this disparity in purpose is rectified by the President's FY 1990 budget.

Question: In addition to the base transfer, BIA proposes a reduction of $6.6 million in water protection, management, and development. What activities will not be funded under the proposed reduction?

Answer: Priority projects recommended by Bureau Area Offices in April will be funded. The priority of a project is based on different criteria for different categories. For negotiation/litigation, cases in immediate need of funding as mandated by court and negotiation proceedings are the highest priority. For management and development, proposed projects which warrant immediate funding are those with potential for economic benefit to tribes, or the potential for avoidance of water rights controversy through water resources management activities promoting co-management of the resources.

Question: What effect does the proposed reduction have on the Bureau's trust responsibility?

Answer: The proposed reduction would not effect the Bureau's ability to meet anticipated immediate programmatic needs. There is no reason to suppose that the proposed reduction would result in a breach of the trust responsibility. Claims preparation work of a high quality is assured through execution by seasoned personnel who have been involved in Indian water rights for a number of years, both in the Bureau and in the Office of the Solicitor, as well as in the Department of Justice.

Continuing Education

Question: Haskell Indian College and the Southwestern Indian Polytechnic Institute (SIPI) offer educational opportunities for students to prepare for four-year colleges, or for immediate employment. Dormitories at both schools continue to be filled to capacity. Has the Bureau considered expanding the dormitories?

Answer: Yes, the Powhatten Dormitory at Haskell was renovated and reopened for school year 1988-89. The Pocahontas Dormitory at Haskell is currently being renovated for occupancy in the 1989-90 school year.

Question: Could these schools enroll more students if the dormitory situation were improved?

Answer: Yes, more students could be enrolled.

Question: For the record, please provide the number of applications received and scholarships awarded, by field of study, for academic years 1987-88 and 1988-1989, and summer school 1987, 1988, and estimated for 1989.

Answer: The information shown below was provided by the contractor for the Special Higher Education Scholarship Program. It should be noted that the number of applications received by the contractor does not necessarily reflect that they were eligible for funding. Many applications are incomplete or incorrect, students have not applied for other supplemental funding as required, or the student is not accepted for school. The contractor has other funds to provide scholarships to Indian students, and the information below shows only those funded with BIA funding.

Special Higher Education Scholarship Program
(Applications received and Scholarships Awarded)

	Summer 1987		1987-1988		Summer 1988		1988-1989		Summer 1989	
Priority Areas	Appl	Awrds	Appl	Awrds	Appl	Awrds	Appl	Awrds	Appl	Awrds
Business	13	2	48	22	31	2	32	28	35	3
Education	42	7	107	55	14	7	63	7	18	9
Engineering			4		2	1	7	7	2	1
Health	44	6	130	67	23	17	83	81	30	25
Law	28	21	145	94	36	30	103	98	42	38
Natural Resources	1	1	1	1			1	1		
Non-Priority			84	11	6	3	3	3	10	2
	128	37	519	250	112	60	292	278	137	79

Other Aid to Tribal Government

Question: One function of the Bureau's Central Office is to offer training to tribal staff in many of the financial and management aspects associated with self-determination contracting. What is the extent of this training program?

Answer: There is not a formal training program for tribal staff. Each Area Office handles the training needs of tribes based on requests from tribes. Most requests are to train newly elected tribal officials rather than tribal staff. Training is usually provided under consultant contracts by professional trainers. Bureau field staff provide assistance to tribes and their staff mainly for contract or grant performance and for audit corrective planning and resolution.

Question: How are participants selected for training?

Answer: As indicated above, the tribes request the training required and determine who is to be trained.

Question: Are tribes aware of this program?

Answer: Tribes are aware of the process for requesting training.

Question: How does training offered by the Bureau for tribal staff compare to that for Bureau staff, relative to P.L. 93-638 and its recently enacted amendments?

Answer: It is too early to say what training will be provided to tribal and Bureau staff since regulations for the P.L. 93-638 amendments have not been completed. However, we expect to provide the same training to both tribal and Bureau field staff.

Question: Would the funds for this training be more properly displayed under the Self-Determination subactivity, rather than transferring to Aid to Tribal Government as the budget proposes? Why wasn't all of this funding proposed for transfer -- rather than only transferring a portion and then proposing a reduction of $191,000?

Answer: The funds transferred will cover the cost of personnel on board, and the consolidation of Tribal Government Services in Central Office will provide the same services in a more efficient manner.

Community Services

Question: Increased funding of $31,000 is requested to provide additional staff capability to carry out oversight responsibility for the tribal services program. What are the current funding and staffing level for this oversight function?

Answer: The Office of the Deputy to the Assistant Secretary - Indian Affairs (Tribal Services) is funded under this line of the budget and has the responsibility for oversight of all Tribal Services programs. The FY 1989 funding for this function is $320,000. The additional $31,000 and 1 FTE will allow the addition of one staff person to assist in these activities.

Question: How will these oversight responsibilities increase? Why is additional staff necessary?

Answer: The recently enacted amendments to P.L. 93-638 will have a significant impact on the self-determination activities of the Bureau which are a direct responsibility of this office.

Tribal Courts

Question: A reduction of $500,000, below the FY 1989 level, is proposed for special tribal courts, based on an anticipated decrease in requests from needy tribal courts (p. 68). Yet, the workload estimates indicate that no changes are forecast between FY 1989 and FY 1990. If this is the case, then why is this decrease proposed?

Answer: "Needy" tribal courts may only receive funding under this program for two years. Based on the funding that has been made available to these courts and the improvements that we hope will result from its use, we anticipate that by FY 1990 there will be a decrease in the need for this type of funding.

Question: An increase of $100,000 is requested to provide specialized onsite training services at the Judicial Services Center. What types of specialized training are envisioned?

Answer: Specialized areas of training will include: taxation, environmental protection regulations, opinion writing at both district and appellate levels, and court management.

Question: Who will participate in this training -- tribal or Bureau staff?

Answer: The majority of trainees will be tribal staff, although a small number of Bureau staff might attend such as CFR court staff.

Question: How many people are expected to participate in the training?

Answer: No specific number has been projected, but the sessions will be designed for small groups of 5 to 20 participants per session, as opposed to our normal training groups of 40 to 60 participants.

Question: Have the tribes expressed an interest in this training?

Answer: Tribal court judges have expressed an interest in more specialized training such as this and will be called upon, through the Center's tribal judges advisory group, to indicate other areas of interest.

Small Tribe Core Management Grants

Question: How many small tribes core management grant applications were received in fiscal years 1988 and 1989? What was the average size of the grant request? How many were funded?

Answer: Ten Bureau Area Offices received 192 Core Management Grant applications in FY 1988, of which 110 were awarded. The average amount requested was $34,041; the average Core grant was $23,500. This includes consortia grants serving an additional 18 tribes and Alaska Native Villages. The application review process for FY 1989 has not been completed so there is no data available on FY 1989 Core Management Grants.

Question: How many additional grants do you estimate would not be funded in FY 1990, if we approve your requested decrease of $1,050,000?

Answer: It is estimated that 25 fewer grants will be awarded in FY 1990 from the estimated 96 Core grants awarded in FY 1989. It is estimated that the average grant award will be reduced by about $2,000.

Self-Determination Grants

Question: In justifying the proposed elimination of Self-Determination grants in FY 1990, the Bureau argues that Small Tribes Core Management grants are available. A vicious circle, don't you think? How many applications for Self-Determination grants were received in fiscal years 1988 and 1989? How many grants were awarded?

Answer: The Area Offices received 184 Self-Determination grant applications in FY 1988 and awarded 178 grants. We do not have data for FY 1989 because not all applications are in for this fiscal year.

Indian School Equalization Formula

Question: For FY 1990, the Bureau proposes to distribute funds for tribal school boards, and the gifted and talented program, on a strict formula basis. Why are these functions transferred into the formula?

Answer: P.L. 100-297, the Education Amendments of 1988 revised the formula to include a weight for gifted and talented students and directed that school board funds be taken from formula dollars received by each school.

Question: Do the different activities in the formula receive the same weighting factor at different locations?

Answer: Yes. The same weighting factors are used for all locations.

Question: Will the school board and gifted and talented programs receive weighting factors?

Answer: P.L. 100-297 stipulated that the formula be adjusted to use a weight of 2.0 for each eligible Indian student who is identified as gifted and talented. Further, "...The Secretary shall reserve for national school board training 0.133 percent of the funds appropriated for each fiscal year for distribution under this section...For each year in which the Secretary uses a weighted formula established to fund Bureau schools, a Bureau school which generates less that 168 weighted units shall receive an additional 2 weighted units to defray school board activities...."

Question: Doesn't inclusion of the gifted and talented funding in a formula restrict a manager's ability to distribute those funds where they are likely to have the greatest effect?

Answer: All schools who identify gifted and talented children, using criteria established after the Department of Education has provided the Bureau with the definition, will be treated equitably by the formula. The establishment of the formula was to prevent some schools from receiving more funds than a neighboring schools with the same enrollment.

Question: How will the school board funding be distributed under the formula?

Answer: Each school which is identified as generating less that 168 weighted student units will receive an additional 2 weighted units to defray school board expenses.

Question: Another factor within the formula is a small school adjustment, in which schools with less than 100 students receive special consideration, since it generally costs more per capita to operate very small schools and dormitories. An increase of $200,000 is requested for this adjustment in FY 1990. Is the adjustment the same for all eligible schools? If not, what factors are considered in the adjustment?

Answer: All schools eligible for the small school adjustment are treated in the same manner. The increase is requested because P.L. 100-297 changed the calculation method for the small school adjustment.

Question: How many schools received such funding in FY 1988? Estimated for FY 1989? FY 1990?

Answer: In FY 1988 and in FY 1989, seventy-five (75) schools received the Small School Adjustment. We estimate the same number for FY 1990.

Question: For the record, please provide a list, by location, of the funding provided, and estimated, for this adjustment, for fiscal years 1988-1990.

Answer: The information is shown on the following two pages for FY 1988-89. We do not expect the FY 1990 adjustment to be substantially different.

FY 1988 SMALL SCHOOL ADJUSTMENT

code	name	ADJUSTMENT	AMOUNT
A01-03	BRIDGER DAY SCHOOL	7.70	18,472
A01-04	CHERRY CREEK DAY SCHOOL	1.92	4,606
A01-06	PROMISE DAY SCHOOL	10.08	24,182
A01-08	SWIFT BIRD DAY SCHOOL	12.48	29,940
A01-10	WHITE HORSE DAY SCHOOL	12.10	29,028
A04-04	Twin Buttes	12.32	29,556
A06-18	Porcupine Day School	4.90	11,755
A07-10	ROSEBUD DORMITORIES	12.42	29,796
A09-03	Enemy Swim	9.62	23,078
A10-03	ROCK CREEK DAY SCHOOL	5.66	13,578
A10-05	LITTLE EAGLE DAY SCHOOL	4.90	11,755
A16-02	Theodore Jamerson	8.86	21,255
B04-06	Kickapoo Nation	4.50	10,796
C59-06	Rocky Boy	4.90	11,755
F51-02	Sac & Fox	10.88	26,101
F53-16	Circle of Life	6.38	15,306
F53-15	Fond du Lac	6.72	16,121
F53-18	Nay Ah Shing	12.50	29,988
F60-07	Hannahville Indian School	5.28	12,667
H52-21	THEODORE ROOSEVELT SCHOOL	18.76	45,005
H54-11	SANTA ROSA RANCH SCHOOL	5.28	12,667
H54-21	SANTA ROSA BOARDING SCHOOL	9.62	23,078

FY 1989 SCHOOLS WITH SMALL SCHOOL ADJUSTMENT

CODE	LOCATION	ADJUSTMENT	AMOUNT
A01-03	BRIDGER DAY SCHOOL	4.10	9,840
A01-04	CHERRY CREEK DAY SCHOO	7.70	18,480
A01-06	PROMISE DAY SCHOOL	8.00	19,200
A01-08	SWIFT BIRD DAY SCHOOL	12.48	29,952
A01-10	WHITE HORSE DAY SCHOOL	11.38	27,312
A04-04	Twin Buttes	11.90	28,560
A06-18	Porcupine Day School	4.10	9,840
A07-10	ROSEBUD DORMITORIES	11.66	27,984
A08-04	Marty	6.38	15,312
A09-03	Enemy Swim	9.86	23,664
A10-03	ROCK CREEK DAY SCHOOL	11.22	26,928
A10-05	LITTLE EAGLE DAY SCHOO	4.10	9,840
A16-02	Theodore Jamerson	4.10	9,840
B04-06	Kickapoo Nation	7.70	18,480
C59-06	Rocky Boy	3.26	7,824
F51-02	Sac & Fox	11.52	27,648
F53-14	Circle of Life	6.02	14,448
F53-18	Nay Ah Shing	12.50	30,000
F60-07	Hannahville Indian Sch	.50	1,200
H52-21	THEODORE ROOSEVELT SCH	17.68	42,432
H54-11	SANTA ROSA RANCH SCHOO	5.66	13,584
H54-21	SANTA ROSA BOARDING SC	9.86	23,664

FY 1988 SMALL SCHOOL ADJUSTMENT

code	name	ADJUSTMENT	AMOUNT
H57-12	Blackwater	12.38	29,700
H61-07	Pyramid Lake	12.38	29,700
H64-08	Duckwater	8.86	21,255
H65-13	HOPI DAY SCHOOL	4.10	9,836
H65-15	MOENCOPI DAY SCHOOL	12.26	29,412
H65-21	KEAMS CANYON BOARDING SCHOOL	12.50	29,988
H68-07	Havasupai	9.97	23,918
M20-22	ZIA DAY SCHOOL	5.66	13,578
M25-13	SAN ILDEFONSO DAY SCHOOL	10.88	26,101
M25-14	SAN JUAN DAY SCHOOL	7.06	16,937
M25-19	TAOS DAY SCHOOL	10.30	24,710
M25-20	TESUQUE DAY SCHOOL	11.30	27,109
M50-02	JICARILLA DORMITORY	12.50	29,988
M75-02	Pine Hill	8.30	19,912
N32-02	ANETH COMMUNITY SCHOOL	11.22	26,917
N32-05	COVE DAY SCHOOL	10.50	25,190
N32-09	SANOSTEE DAY SCHOOL	7.70	18,472
N32-13	Shiprock Dorm	15.20	36,465
N32-17	Shiprock Alt. Kindergarten Sch.	12.00	28,788
N33-15	ROCKY RIDGE BOARDING SCHOOL	8.86	21,255
N33-24	Little Singer	12.18	29,220
N34-04	BREAD SPRINGS DAY SCHOOL	.98	2,351
N34-05	CHI-CH'IL TAH / JONES RANCH	12.48	29,940
N34-06	HUERFANO DORMITORY	8.58	20,583
N34-10	LAKE VALLEY NAVAJO SCHOOL	12.46	29,892
N34-12	MARIANO LAKE COMMUNITY SCHOOL	12.00	28,788
N34-15	PUEBLO PINTADO COMMUNITY SCHOOL	.98	2,351
N34-16	STANDING ROCK COMMUNITY SCHOOL	10.50	25,190
N35-06	LOW MOUNTAIN BOARDING SCHOOL	12.48	29,940
N35-09	NAZLINI BOARDING SCHOOL	11.06	26,533
N35-10	PINON DORMITORY	8.00	19,192
N35-23	Black Mesa	9.38	22,503
N36-05	CRYSTAL BOARDING SCHOOL	2.38	5,710
N36-14	KINLICHEE BOARDING SCHOOL	10.30	24,710
N36-18	PINE SPRINGS BOARDING SCHOOL	23.72	56,904
N36-19	SEBA DELKAI BOARDING SCHOOL	12.18	29,220
N36-24	WIDE RUINS BOARDING SCHOOL	1.92	4,606
P03-02	Paschal Sherman	13.00	31,187
P04-02	Shoshone-Bannock	12.26	29,412
P05-02	Coeur d'Alene Tribal School	12.50	29,988
P10-02	Quileute	12.42	29,796
P10-13	Wah-He-Lute	11.06	26,533
P10-14	Lummi	.98	2,351
P10-16	Muckleshoot	11.78	28,260
P11-20	Yakima	12.26	29,412
P13-02	Two Eagle River	12.48	29,940
S53-02	Ahfachkee Day School	12.38	29,700
S54-02	Miccosukee Indian School	12.26	29,412
S57-02	Indian Island School	2.38	5,710
S78-12	CHITIMACHA DAY SCHOOL	12.42	29,796
S78-13	RED WATER DAY SCHOOL	2.38	5,710
S78-16	STANDING PINE DAY SCHOOL	12.00	28,788
S78-23	CHOCTAW CENTRAL SCHOOL	8.58	20,583
75.00		714.43	1,713,918

FY 1989 SCHOOLS WITH SMALL SCHOOL ADJUSTMENT

CODE	LOCATION	ADJUSTMENT	AMOUNT
N56-02	PHOENIX HIGH SCHOOL	18.72	44,928
H57-12	Blackwater	12.48	29,952
H61-07	Pyramid Lake	12.00	28,800
H64-08	Duckwater	7.38	17,712
H65-13	HOPI DAY SCHOOL	7.38	17,712
H65-15	MOENCOPI DAY SCHOOL	12.50	30,000
H65-21	KEAMS CANYON BOARDING	11.90	28,560
H68-07	Havasupai	6.38	15,312
M20-22	ZIA DAY SCHOOL	7.06	16,944
M25-13	SAN ILDEFONSO DAY SCHO	10.70	25,680
M25-14	SAN JUAN DAY SCHOOL	10.30	24,720
M25-19	TAOS DAY SCHOOL	4.10	9,840
M25-20	TESUQUE DAY SCHOOL	12.18	29,232
M50-02	JICARILLA DORMITORY	12.50	30,000
M75-02	Pine Hill	10.08	24,192
N32-02	ANETH COMMUNITY SCHOOL	8.86	21,264
N32-04	BECLABITO DAY SCHOOL	6.72	16,128
N32-05	COVE DAY SCHOOL	11.06	26,544
N32-09	SANOSTEE DAY SCHOOL	9.12	21,888
N32-13	Shiprock Dorm	10.94	26,256
N32-17	Shiprock Alt. Kinderga	11.06	26,544
N33-11	NAVAJO MOUNTAIN BOARDI	2.82	6,768
N33-14	RICHFIELD DORMITORY	3.68	8,832
N33-15	ROCKY RIDGE BOARDING S	11.52	27,648
N33-24	Little Singer	12.46	29,904
N34-05	CHI-CH'IL TAH / JONES	12.42	29,808
N34-06	HUERFANO DORMITORY	9.12	21,888
N34-10	LAKE VALLEY NAVAJO SCH	12.50	30,000
N34-12	MARIANO LAKE COMMUNITY	12.18	29,232
N34-16	STANDING ROCK COMMUNIT	11.52	27,648
N35-06	LOW MOUNTAIN BOARDING	12.10	29,040
N35-09	NAZLINI BOARDING SCHOO	12.48	29,952
N35-23	Black Mesa	10.70	25,680
N36-05	CRYSTAL BOARDING SCHOO	10.50	25,200
N36-14	KINLICHEE BOARDING SCH	9.86	23,664
N36-18	PINE SPRINGS BOARDING	22.32	53,568
N36-19	SEBA DELKAI BOARDING S	11.52	27,648
N36-26	WIDE RUINS BOARDING SC	.50	1,200
P03-02	Paschal Sherman	16.10	38,640
P04-02	Shoshone-Bannock	11.06	26,544
P05-02	Coeur d'Alene Tribal S	12.26	29,424
P10-02	Quileute	11.78	28,272
P10-13	Wah-He-Lute	11.38	27,312
P10-16	Muckleshoot	12.50	30,000
P11-20	Yakima	12.38	29,712
P13-02	Two Eagle River	11.22	26,928
S53-02	Ahfachkee Day School	12.10	29,040
S54-02	Miccosukee Indian Scho	12.10	29,040
S57-02	Indian Island School	.98	2,352
S78-12	CHITIMACHA DAY SCHOOL	12.50	30,000
S78-13	RED WATER DAY SCHOOL	4.90	11,760
S78-16	STANDING PINE DAY SCHO	12.50	30,000
S78-23	CHOCTAW CENTRAL SCHOOL	8.00	19,200
75.00		735.06	1,764,144

Question: Weighting within the formula is also provided for handicapped students. Individualized Education Plans (IEPs) are prepared to help address the special requirements of these students. Are these plans prepared for all handicapped students?

Answer: Yes, preparation of an IEP is a requirement for placement in the handicapped program.

Question: Who prepares these plans?

Answer: The IEPs are prepared by a multi-disciplinary committee composed of a school official, teachers, counselors, parents and usually a psychologist. An IHS representative is part of the committee if student condition warrants.

Question: Are they updated on a regular basis? How often?

Answer: Some plans are updated on a daily basis, as the student receives services. Other plans may not require daily updating, but may be updated weekly, monthly, or as necessary depending on what the student receives and how he/she progresses.

Indian School Program Adjustments

Question: Special programs and activities are not funded in the formula. Instead, they are considered program adjustments. Savings in any of these special adjustments are added to the formula distribution. Do these savings occur often? To what do you attribute such savings? What has been the extent of the savings realized in the last two years?

Answer: There have been no savings in the Indian School Adjustment Funds in the last two years.

Question: When is the decision made to transfer the funding?

Answer: If funds were available they would be distributed to the schools in July or August before the end of the fiscal year.

Exemplary Schools

Question: Last year, the Congress provided funding for the Bureau to recognize exemplary schools, which would in turn "adopt" another school. Which schools were recognized as exemplary in FY 1989?

Answer: The ten schools selected for exemplary status were: Jemez Day School, Wingate High School, Chief Leschi Schools of the Puyallup Tribal School System, Santa Fe Indian School, Laguna Elementary School, Two Eagle River School, Cherokee High School, Dilcon Boarding School, Ojibwa Indian School, and Wingate Elementary School.

Question: Which schools did they adopt?

Answer: Wingate High School adopted Chi-Chil-Tah/Jones Ranch; Cherokee Central School adopted Choctaw Central School; Two Eagle River School tenatively adopted Busby School; Jemez Day School adopted Ahfachkee and Miccosukee Schools; Ojibwa Indian School adopted Dunseith Day School; Wingate Elementary School adopted Teecnospos Boarding School; Santa Fe Indian School will distribute information to all of the feeder schools; Chief Leschi School adopted Wa-He-lute Schools; Laguna Elementary School adopted Zia Day School; and Dilcon Boarding School adopted Seba Dalkai;

Question: Do schools apply for the program, or is the recognition initiated by the Bureau?

Answer: The schools apply for the program.

Student Transportation

Question: The Bureau provides funding to assist with the transportation of students between their residences and schools. On average, how much is spent per student, per year, for transportation? In FY 1987? FY 1988? FY 1989? FY 1990?

Answer: Student transportation funds are distributed on the basis of bus miles driven for day students or actual cost of transportation to school in the fall for boarding students. The following table divides the total funds appropriated for transportation by the total number of students in our school system.

Student Transportation

Fiscal Year	Funds Appropriated for Transportation	Calculated Amount per Student
1987	$11,639,000	$292
1988	$11,962,000	302
1989	$11,817,000	300
1990	$11,861,000	303

Question: How does this compare with public schools in comparable locations?

Answer: For school year 1986-87, the average per pupil cost based on an average daily attendance was $292 per pupil. This may not include capital items such as buses.

Question: What factors does the Bureau reflect in establishing cost per mile?

Answer: Transportation costs include personnel services, GSA vehicle rental fees, maintenance and repair fees, fuel and supplies. The distribution of student transportation funds is based on division of total appropriation by the bus miles reported during count week. The Bureau does not calculate a cost per mile and distribute funds on that basis.

Question: Unimproved roads receive a weighted factor, since they increase transportation costs. How many miles fall into this category?

Answer: In FY 1989, there were 12,607 day transportation miles (average daily) and 9,039 residential transportation miles which received the weighting factor.

Question: What percentage is this of the total miles?

Answer: This represents thirty percent for day transportation miles and 13 percent for residential transportation miles.

Question: Are road construction funds, from the Highway Trust Fund, used to help address these needs?

Answer: Yes, if the road traffic volume would warrent upgrading to the standards required by the Department of Transportation.

Education Program Support

Question: The budget justification indicates that the Office of Indian Education Programs (OIEP) will provide automated data processing (ADP) services for all locations and for other Bureau offices. What other Bureau offices will receive services from OIEP?

Answer: OIEP's computerized printer is hooked up to the computer from the Central Office West located in Albuquerque, NM. Frequently, reports come over that printer for Financial Services, Law Enforcement, Personnel, Trust, Social Services, Roads and Office of Construction Management.

Question: Will these offices reimburse OIEP for services provided?

Answer: These offices periodically provide OIEP with computer paper. OIEP also uses the ADP services from Budget and Finance when the OIEP printer is not working or when additional printer capability is needed. There are no reimbursements.

Question: If not, how do you justify categorizing these functions as educational?

Answer: The minimal cost for providing these services to other Bureau offices is offset by the benefits that the ADP center provides OIEP in access to the Bureau's finance and student enrollment system.

Question: Support for agency and area offices is proposed to decline by $1.6 million in FY 1990. Savings are anticipated through ever-popular "management initiatives", which are intended to streamline delivery systems, improve cost effectiveness, and increase efficiency of program operations. Specifically, what are these "management initiatives" and how much will each of them save?

Answer: The Bureau proposes to reduce the technical support costs by 17 percent in FY 1990. The current field structure was established in 1980, but the operation needs have changed as the result of the emphasis on contracts and grants for school operations and education programs, and the decrease in the number of schools served. Historically, approximately 42 percent of the funds for field operations have gone to Area Education offices which serve 23 percent of the student population, and 8.4 percent of the student population in Bureau operated schools. Some of the area offices have staff numbers capable of supporting larger operations than currently needed. Many of the functions performed by the Area Offices could be transferred to agency locations without substantial transfer of staff. Presently, there are four area offices that could be combined with other area offices to reduce operating costs and not reduce services. There are six agencies that serve three schools or less that could be consolidated with other agency or area office to reduce costs without loss of service.

Question: Have they been tried before, either in the education programs or in other Bureau programs?

Answer: Yes, accounting management functions were substantially consolidated in Albuquerque, New Mexico last year.

Question: What do you intend to do if these savings aren't realized?

Answer: The Bureau is confident that savings will be realized.

Road Construction

Question: Why is the Bureau proposing to transfer the road construction and maintenance activity from the Operation of Indian Programs account to the Construction account?

Answer: As road work is often dependent on weather conditions, the carry-over authority of the Construction account would assure efficient usage of total appropriated funds. Also, organizationally, the same Bureau staff are responsible for the road construction and road maintenance programs.

Question: Were the tribes consulted regarding this transfer?

Answer: The tribes were not consulted on this transfer.

Question: Why does the Bureau propose to increase the allowance for road program management costs when the Bureau's allocation from the Highway Trust Fund has been reduced by $20 million since FY 1987?

Answer: Even with the reduced allocation, funds are distributed to all areas, and staffing requirements remain unchanged.

Question: Is the same field organization necessary given the reduced allocation?

Answer: Yes, the same structure is required to ensure adequate planning and implementation of the construction program.

Indian Arts and Crafts Board

Question: While the Bureau does not operate the Indian Arts and Crafts Board, the functions of the Board fall under the broad category of economic development. Annual sales of Native American arts and handicrafts total several hundred million dollars, but Native American interests control only a small portion of this market. What can be done to help Native Americans receive more of the benefits of their craftsmanship?

Answer: Production and marketing of Indian handcrafts is a highly fragmented process, and it necessarily depends heavily on individual creativity and personal decisions. Producers are typically located in widely dispersed and often remote geographical locations. Consumers are generally receptive to Indian art products because of the Indian mystique, but are not knowledgeable about the products or the markets and are not usually interested in expending much effort to seek out the sources of production.

The Indian Arts and Crafts Board (IACB) provides general business advice to individuals and groups that are interested in starting an enterprise, and IACB identifies other public and private sources of assistance available to the potential entrepreneurs. Locating enough capital to start is often a major stumbling block, as crafts marketing is perceived to be a high-risk venture. Funds that might be available are often committed to other types of economic development that offers more lucrative total employment.

IACB promotes existing enterprises through product exhibitions, by working with the media to increase the visibility of these enterprises and the craftsmen who produce for them, and by a consumer directory that enables both retail and wholesale buyers to deal directly with Indian enterprises. The objective is to eliminate as many middlemen as possible between the craftsmen and the consumer in order to maximize profits for the producer and the Indian marketing enterprise. The majority of existing enterprises are small businesses with less than $100,000 in annual sales, and they market close to home. Few Indian craft marketing enterprises of any size have attempted to export products, although the export market shows good potential. The Congress has recently addressed this in the Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418) by directing the Commerce Department to give special attention to assisting Indian craft marketing enterprises to export.

Consumers need to be educated about the unique design and cultural properties of Indian handcrafts; they need to understand the intricate workmanship that is entailed so that they can appreciate the necessarily higher cost of the product; and they need to be encouraged to deal with Indian enterprises. Wider use of the trademarks by Indian enterprises could increase consumer awareness and interest in these enterprises, and IACB encourages it, but the cost and intricacy of the application process is a barrier to many enterprises. Because of consumers' general receptiveness to Indian products, imitations are produced domestically and overseas. When these imitations are misrepresented and passed off as the genuine product, it follows that they reduce the benefits Indian people receive from their craftmanship. Various measures to control misrepresentation exist at the federal level and in some states, but they could be improved to make enforcement more efficient and a more meaningful deterrent.

Question: Would projects, which attempt to achieve this goal, be eligible for Business Development grants?

Answer: Yes, such a project would be eligible if organized as a for-profit enterprise that directly benefits reservation economies.

Natural Resources -- Geographic Information Systems

Question: State-of-the-art computer technologies, which help to identify resource bases and assist in management analyses, are a vital tool for the Federal Government in its trust responsibilities for Native Americans. This is especially true with respect to natural resources on tribal lands. To what extent has the Bureau used the technical resources and expertise available in the U.S. Geological Survey?

Answer: BIA has capitalized extensively on the technical resources and expertise of the U.S. Geological Survey. Although USGS does not market a technology which is capable of supporting the operational BIA GIS program, USGS demonstration projects and training provide insights into capabilities of the technology. The USGS training facility at the Denver Federal Center is currently used for the BIA GIS training program. A regular interchange of technical information occurs via the Interior Digital Cartographic Coordinating Committee. BIA utilizes USGS digital map data in many of its GIS projects. USGS conducts numerous demonstration projects in cooperation with Federal and state governments. The BIA is operationally implementing GIS and no longer requires demonstrations of this highly desirable and effective technology.

Question: I understand that 115 reservations are to have digital data bases on natural resources -- how were they chosen? Will there be others?

Answer: Initial determination of which reservations were to be included in the data base construction effort was based on an arbitrary cut-off point of 10,000 acres. This cut-off was required because of limitations of the computer software being used at the time. This is no longer the case. A more sophistiystem allows for the inclusion of much smaller land areas, and as a [illegible], the number of data bases has subsequently grown.

As of March 21, 1989, 139 reservations have had some level of digital data capture completed. Of these, 120 have data bases, comprised of basic thematic data such as public land survey, reservation, state, and county boundaries, lakes and reservoirs, springs, and wells, streams and rivers, transportation, and joint management areas. As use of GIS expands to areas outside of traditional natural resources management such as transportation planning, roads management, realty, and law enforcement, additional reservations are being added to the national BIA spatial data base.

Question: How many of the digital data bases are completed?

Answer: "Complete" in the context of GIS data bases is an elusive term. A GIS data base is dynamic. One of the advantages of using this technology is the ability to rapidly accomplish changes to the digital map data. Due to the effects of management activities on the resources and the nature of the resources themselves, data bases are constantly being updated and are never truly complete or final. As noted above, 120 reservations have the basic data layers completed. There are currently 71 GIS data bases with resource specific data adequate to conduct resource specific analyses. This total is increasing monthly.

Question: When will they all be completed?

Answer: Based on total land area, the bulk of data entry of the basic themes outlined above has been completed for the lower 48 states. Because of the lack of quality base maps and resource inventory data, data base construction has not started for Alaska. Resource specific data capture is currently proceeding in ten of the twelve Area Officers. Some reservations lack current resource inventory data and data base construction is contingent upon completion of field mapping activities.

The data bases for numerous reservations have reached a point of maintenance. That is, new themes are only occasionally added, and up-to-date procedures are utilized to ensure accuracy of the map data. As data bases reach this point, the data entry effort is considerably reduced. Considering the wealth of potential applications of GIS, the continuing collection of inventory information, and the addition of new uses of technology, it will never be possible to state that all data bases are complete. It should be assumed that data entry efforts will abate as more data bases reach the maintenance stage.

Question: What is the relationship between the Integrated Resource Management Planning program, the Geographic Information Systems program, and the digital data bases?

Answer: The integrated resource management planning (IRMP) process is an interdisciplinary approach to defining overall resource management goals for each reservation. GIS is one of the tools available to the teams developing these plans. The technology allows managers to quickly describe resources on a locational and statistical basis, identify areas of potential resource conflicts, and evaluate management alternatives. Because of the need for all resources to be represented in the process, IRMP development requires a complete range of themes in the GIS development process. Once the IRMP process is complete, the digital data base is available for all resource management activities as well as use by non-resource personnel.

Question: For the record, please provide a breakout of Geographic Information System funding in the Bureau's budget, FY 1988-1990.

Answer:	FY 1988	$1,296,000
	FY 1989	$1,846,000
	FY 1990	$1,971,000

Natural Resources -- General

Question: An increase of $143,000, and 4 FTEs, is requested for Central Office staffing related to natural resource policy development, oversight, direction, and support. Doesn't the Central Office already perform these functions?

Answer: Yes, (4) four FTEs presently perform the above mention duties, the position titles are Chief Division of Water and Land Resources, Secretary and Program Specialist at Central Office, and the coordinator of the Geographic Information Systems (GIS) at the Denver Field Office.

Question: Why are these additional positions necessary?

Answer: This request does not represent an actual increase in positions. This is a reassignment of FTEs and appropriate funding. The FTEs for the Division Chief of Water and Land Resources and Secretary currently reside in the Branch of Water Resources. The FTEs for the Program Specialist and GIS coordinators reside in Agriculture.

Question: What purpose will they serve, other than to create another bureaucratic layer?

Answer: This transfer to Natural Resources General does not create a new layer, it simply moves (4) four FTEs and appropriate funding of existing positions to the Natural Resources General account and subsequently reduces the FTEs of Water Resources and Agriculture by 2 each. These positions provide overall support, policy and direction to all programs of the Division of Water and Land Resources (e.g., Natural Resource General, Agriculture/Range, Irrigation O & M, Wildlife and Parks and Water Resources). This reassignment of FTEs more acturately reflects the roles and responsibilities of these four positions in the proper program within the budget request.

Forestry

Question: What is the total number of forestry acres over which BIA trust responsibility is extended?

Answer: There are approximately 16,000,000 acres considered forestry acres out of a total of nearly 55,000,000 acres currently held in trust.

Question: How has this total changed over the last five years?

Answer: An economic shift in emphasis from range values to forest products values resulted in the responsibility for management of Indian woodlands to be assigned to the Bureau's Forestry Program in 1987. Woodlands then became a component of the Indian forest land base and fell within the purview of 25 CFR 163. This added 8.4 million acres (4.5 commercial) to the Forestry Program's existing acres under management. Land settlements and acquisitions have accounted for approximately 52,000 acres being added to the land base from the Quinault Tribe, the Grand Ronde Tribe, the Jicarilla Apache, and other newly recognized tribes in Rhode Island, Connecticut, and Alabama.

Question: What procedure does BIA have to address the inclusion of new acreage within the forestry trust responsibility?

Answer: There are no special procedures for addressing these accrued acres other than adding them to the list of lands which the Bureau is already responsible to manage, and redistributing program appropriations to meet these additional needs.

Question: I understand that approximately 50,000 acres of forest resources have been added recently to the forestry base, of which some 20,000 acres have been managed previously by other Federal agencies, notably the Bureau of Land Management (9,800 acres) and U.S. Forest Service (20,000 acres). Have appropriate transfers been made to the budget to reflect these new management responsibilities?

Answer: No fund transfers have been made.

Question: Would it not be appropriate to make such adjustments to the respective budgets of these land-managing agencies?

Answer: The Bureau would support the simultaneous transfer of resources to manage land and the land itself. If not, it results in a substantial inequity in the abilities of the agencies to manage these lands.

Agriculture

Question: In FY 1990, the Bureau proposes to begin a five-year prairie dog control program at the Fort Belknap, Rosebud, Cheyenne River, and Northern Cheyenne Reservations. What is the estimated total cost for this program?

Answer: The estimated costs of the five-year program for the cited reservations is $1,250,000, broken down as follows:

(In thousands of dollars)

Reservation	Total Cost	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994
Pine Ridge	$500	$100	$100	$100	$100	$100
Rosebud	250	50	50	50	50	50
Ft. Belknap	200	40	40	40	40	40
Northern Cheyenne	200	40	40	40	40	40
Cheyenne River	100	20	20	20	20	20
Totals	$1,250	$250	$250	$250	$250	$250

Question: Are other reservations experiencing similar problems with prairie dogs? What do you intend to do to meet their needs?

Answer: Yes, there are other prairie dog infestation problems in the northern plains reservations and on the Navajo reservation. These infestations are minor; because of low infestations in scattered dog towns, their populations have not reached a level to be destructive to grazing lands. The area and agency offices attend to these problems through the land operations and maintenance programs.

Noxious Weed Eradication

Question: The Bureau is requesting an increase of $400,000 in FY 1990 to initiate a five-year noxious weed management program. This program would be conducted consistently with noxious weed control efforts of neighboring jurisdictions, and in conjunction with State efforts. In FY 1990, the Bureau's program would cover 1.7 million acres. What is the total estimated cost of the program over the 5-year period?

Answer: The total estimated cost of the noxious weed control program for the five-year program is $5,000,000. The costs relative to the work will be described in the actual five-year plan which is being drafted.

Question: The current noxious weed program is funded at $330,000, which allows for treatment of 10-20 thousand acres. What is the basis for the huge increase in estimated acreage to be treated, with only a $70,000 increase in funding?

Answer: The base for FY 1990 is $330,000 for noxious weed control. We have requested an increase of $400,000 over the base, not $70,000. The total requested funding for this program as stated on page 129 is $730,000 for the first year of the five-year program.

Question: Why can't some of these efficiencies be applied to the base program?

Answer: The base figure for FY 1990 is actually the funding level for the 1989 noxious weed control program which was limited in scope and covered a small but troublesome acreage in selected reservations. The eradication effort will be a systematic attempt at getting rid of noxious weeds in all infested areas within five years as proposed in the long-term plan.

Natural Resource - Tribe/Agency Operations

Question: The workload data for the tribe/agency agricultural program shows projected increases in ten of the twelve functional categories, yet funding is proposed to decrease by $725,000. What will be the effect of insufficient funding to address these workload indicators?

Answer: The workload indicators shown on p. 159 depict optimum accomplishments as determined by the agency and area office technical staff to carry out the Bureau's mission and goals. However, the budget figures are established by tribes and reflect goals and objectives which in many cases address human service programs at the expense of natural resource programs. We anticipate that the increased workload in 4 of the ten indicators, 1) Rangeland Conservation Management and Development Measures; 2) Soil Investigation; 3) Range Unit Compliance Inspections; and 4) Range Inventories may not be properly addressed at the funding levels established by the Tribes.

Question: Several program decreases in the natural resources are made at the Minneapolis Area/Great Lakes Agency due to a shortfall associated with the removal of certain wildlife and parks programs from the Indian Priority System band. Please explain more clearly what has happened with the funding provided for the Great Lakes Agency. How did this occur?

Answer: In FY 1987, certain wildlife and parks projects were transferred to the Indian Priority System (IPS). At the direction of Congress, funding for these same projects were removed from the IPS. When the Bureau took the action to reverse the FY 1987 actions, it was discovered that some of the tribes in the Great Lakes Agency had moved some of the wildlife and parks funding to Tribal Courts and other tribal priorities. The adjustments shown in other parts of the budget were necessary to establish the wildlife and parks funding at the level provided by Congress and yet reflect the priorities of the individual tribes. The individual tribes did not lose any funding; they received the wildlife and parks funding for their projects from non-banded activities of the budget rather than from the IPS.

Question: Why are non-wildlife and parks programs affected and penalized by this transfer?

Answer: As stated in the previous answer, the tribes did not lose any funding. The adjustments to non-wildlife and parks programs were made on the basis of the priority ranking charts developed by the individual tribes. The Agency has submitted a reprogramming from some of the tribes who wished to make changes to their program priorities to reflect the transfer. This reprogramming was approved by the Area Director and will be processed.

Fish Hatcheries

Question: Again in FY 1990, the Department has proposed to transfer hatchery funding appropriated to the Fish and Wildlife service back to the Bureau of Indian Affairs, despite Congress' provision of funding to the Fish and Wildlife Service in both FY 1988 and FY 1989. Why does the Administration refuse to maintain this funding in the Fish and Wildlife Service budget?

Answer: Under the Self-Determination amendments of 1988, tribes will be afforded the opportunity to contract funds provided to all Interior bureaus for the delivery of services to Indians.

The Department believes that funding for these facilities should be provided through the budget of the Bureau of Indian Affairs because the primary benefits of the program involved accrue directly to the tribes. The Fish and Wildlife Service is charged with providing technical assistance. An "Agreement on Policy: Trusteeship of Tribal Fishery Resource," signed by the Assistant Secretaries for Indian Affairs and Fish and Wildlife and Parks in 1984, recognizes the Service as the Department's principal scientific authority on fishery matters and states that the Service shares with the Bureau the obligation to assist in fulfilling the Secretary's Indian trust responsibilities.

Bureau personnel are not trained or equipped to manage these facilities. To the extent that tribes cannot directly provide for their own fish and wildlife resource management needs, the Bureau will continue to rely on the FWS for the delivery of services. Responsibilities for managing and developing Indian fish and wildlife resources, however, are most appropriately carried out by the tribes themselves, through the development of trained, professional tribal staffs who are accountable, not to federal agency personnel, but to the tribal governing bodies. The success of the Wildlife and Parks budget in promoting full tribal capability in the management of fish, wildlife and outdoor recreation resources is evidenced by the fisheries programs of the Northwest and Great Lakes tribes and the big game management programs of the Southwest tribes. We understand that the FWS is developing a training program in conjunction iwth the Fisheries Academy at Leetown, West Virginia, to provide training opportunities for participating tribes.

Question: Is this a management responsibility more appropriately assigned to the Fish and Wildlife Service?

Answer: To the extent that tribes cannot directly provide for their own fish and wildlife resource management needs, the Bureau agrees that the FWS is the most appropriate agency to provide technical assistance. Responsibilities for managing and developing Indian fish and wildlife resources, however, are most appropriately carried out by the tribes themselves, through the development of trained professional tribal staffs who are accountable, not to federal agency personnel, but to the tribal governing bodies. The success of the Wildlife and Parks budget in promoting full tribal capability in the management of fish, wildlife and outdoor recreation resources is evidenced by the fisheries programs of the Northwest and Great Lakes tribes and the big game management programs of the Southwest tribes.

Question: Explain the distribution of the $1,680,000 available in the BIA budget for FWS technical assistance. Is this amount the same as was transferred to FWS in FY 1989?

Answer: This is not the same amount. The $1,367,000 supports four fish hatcheries, $187,000 supports three fisheries assistance offices, and $187,000 is contracted to the White Mountain, Colorado River, and San Carlos tribes.

Question: What is meant by the statement, "...the bureau will work to have the services performed through each facility contracted to the affected tribes as soon as they are ready to assume control over program operations?"

Answer: Tribes agree that the services should be provided by the FWS. Several tribes receiving services through FWS facilities, however, have expressed a preference for retaining the option to contract portions of facility operations funds to develop tribal resource management staffs and operations. It was in response to such requests that $187,000 of the increase initially proposed for the Parker and Pinetop offices in FY 1989 was transferred instead to the Colorado River, White Mountain Apache and San Carlos Apache tribes, and that funding for the Service's Olympia Fish Health Lab was transferred to the western Washington tribes in FY 1988.

The Shoshone and Arapahoe tribes may wish to contract the $171,000 in federal assistance funds currently earmarked for the Lander, Wyoming office to begin implementing their new tribal game code in FY 1990. The Navajo, Zuni, Jicarilla, San Ildefonso, San Juan, Santa Clara, Picuris and Nambe tribes have already entered into P.L. 93-638 contracts with the Bureau to begin implementing their own fisheries programs, and are exploring options for expanding tribal operations, including new fish rearing and stocking programs to better meet their needs. The Navajo Tribe recently completed construction of a tribal fish hatchery, and the Zuni and Santa Clara tribes are actively exploring fish rearing feasibility options on their reservations. Some of these tribes are currently using their own resources to purchase fish more suitable for stocking into their lakes than have been available for the federal fish hatcheries.

The Bureau strongly supports fish and wildlife training programs for tribal members, and has spent much time and effort during the last year developing a specialized course to train tribal conservation enforcement officers at the

Bureau's Marana, Arizona Law Enforcement Academy. More importantly, however, tribal members should be encouraged to pursue degrees in fish and wildlife management at recognized universities, so that tribes which hire them can deal one-on-one with state and federal resource managers.

Minerals and Mining

Question: An increase of $95,000 is requested to improve royalty, energy and minerals management at locations with significant backlog. What is the extent of the backlog? What is the total estimated cost to work through the backlog? How much of that backlog can be addressed with the proposed increase? To what extent are the different program areas (feasibility studies, lease compliance, and environmental reviews) confronted with the backlog?

Answer: The backlogs refer to backlogs in lease and data quality control at various agencies in each Area. The backlogs increase and/or decrease from agency to agency over time depending on the staffing patterns at the areas and agencies and the level of quality control experience of the personnel. Because the quality control backlogs appear to exist primarily as a result of a lack of subject matter and procedural training in quality control, the funds requested will be used to solve those specific deficiencies. The funds will be used (1) to develop and provide training and quality control materials for lease and data quality control, which will include error or defect identification and resolution for lease documents and lease data in the Bureau's data systems; and (2) to determine the need and feasibility of establishing lease management and quality control units at each Area, such as the one in the Anadarko Area Office.

Environmental Quality

Question: The justification indicates that much of the work for environmental examinations and reviews is conducted by programs other than environmental quality, such as minerals, forestry, water, etcetera. Workload is projected to increase from FY 1989 to FY 1990, particularly for environmental examinations and assessments. Do the different program areas have sufficient funds to address this changing workload?

Answer: There is sufficient funding and personnel in the various programs to address environmental examinations and review. Generally, environmental assessments (EA) can be covered by existing funds and personnel. However, comprehensive EA's are similar in scope to environmental impact statements and more than one will put a strain on any program. The impacts of increased environmental assessments and reviews will rest with the Environmental Coordinators who are very limited in both staff and funding. These positions are are responsible for the oversight, coordination, review, guidance and direction of the preparation of the EA's and in processing the review.

Question: Who bears responsibility for cleanup or remediation of hazardous waste sites on Indian lands?

Answer: Under the National Contingency Plan (40 CFR 300), the Environmental Protection Agency (EPA) is responsible for National Priority Listed (NPL) sites. There are five sites on Indian lands which are listed on NPL. All sites listed on the NPL are eligible for EPA cleanup from the "Superfund". EPA, however, asserts that because of this policy concerning priorities, non-NPL sites will not be addressed by the fund, but compliance will remain responsibility of the owner/operator. The Bureau is neither the owner nor the operator of these sites. Some of these sites, for example, were landfills owned and operated by Tribes. EPA shares with other Federal agencies trust responsibility to protect the environmental interest of Indian tribes and their land. In 1984, EPA's Indian policy statement affirmed this principle for a range of environmental authorities. We believe that EPA rather than Interior should assume financial responsibility for remedial cleanup of hazardous waste sites on Indian trust lands.

Liability Insurance

Question: The Bureau is proposing, through appropriations language, a change in the time period for implementation of the liability insurance provision included in the Self-Determination Act Amendments. You are requesting a one year delay to allow the Departments of Interior, Justice, and Health and Human Services, and the Office of Management and Budget, time to address the new requirements. What are the concerns which have lead to this requested delay?

Answer: The legislation is silent with respect to both the type(s) of liability insurance the Secretary is required to purchase (i.e. general commercial, motor vehicle, product liability, etc.) and the limit per claim. These issues need to be resolved through regulations.

Based on the sovereign immunity of tribes from suit and the fact that those tribes which do carry liability insurance usually have policies covering tribal and multiple Federal programs, there is insufficient information upon which to base an estimate of potential claims arising solely from BIA contracted programs. Further, the Bureau has virtually no control over the non-federal facilities which house some contracted programs with respect to life and safety standards.

There are also concerns over the multiple legal jurisdictions and tribal courts which would decide awards which could not be settled out of court.

Question: Is 1991 an attainable goal?

Answer: That will depend on the status of proposed regulations and the ability of the Bureau to secure coverage in more than thirty (30) states.

Question: Do you have any preliminary estimates of the budget effect of this requirement?

Answer: A very preliminary estimate is about $15 million.

Question: For the record, please provide additional justification regarding the following internal transfer proposals:

±400	From Indian Integrated Resources Inventory to Area Office operations and Central office staff
±150	From Tribal Management/Development Projects to Area Office operations
±660	From Trust Responsibilities (Hunting & Fishing Rights) to Natural Resources and Unresolved Hunting and Fishing Rights
±303	From Unresolved Rights Issues to Other Real Estate Services -- Central Office

Answer: In the past several years these funds have been used to support basic operations at the area and Central Office levels. The internal transfers more accurately display the use to which the funds have been put.

QUESTIONS SUBMITTED BY SENATOR J. BENNETT JOHNSTON

The FY 1989 appropriations bill for the Department of Interior and Related Agencies provided $386,000 in base funding for the Chitimacha Tribe. The bill further provided that all add-ons in tribe/agency operations were to be added to the base unless otherwise indicated.

Question: To date, the Chitimacha Tribe has only received $200,000 of this funding. When do you intend to provide the Tribe with the balance of its FY 1989 appropriation?

Answer: The tribe received the full amount of the FY 1989 funding, however only the $200,000 added by Congress in FY 1988 was added to the tribe's planning base for FY 1990.

Question: Despite the language in the FY 1989 bill indicating that this funding was to be included in the base, I understand that it has not been included in the Administration's FY 1990 budget proposal. Please explain this omission.

Answer: Approximately $5.7 million in Congressional add-ons for tribe/agency programs in FY 1989 are not included in the FY 1990 budget. Included in these add-ons is $186,000 for the Chitimacha Tribe. The Congressional directives accompanying the FY 1989 appropriations directed the Bureau of Indian Affairs to include these add-ons as base changes for specific tribes. As you know, the Federal budget formulation process begins at least 18 months prior to the start of the fiscal year. Consequently, budget allowances and funding priorities for the FY 1990 budget had been established long before the FY 1989 appropriations act was passed by Congress, and the Bureau was unable to comply with these directives without reducing funding for ongoing programs or for other tribes.

QUESTIONS SUBMITTED BY SENATOR DENNIS DECONCINI

Funding of Indian Water Rights Settlement

Question: Over fifty lawsuits are now pending before state and federal courts to resolve disputes over tribal rights to water flowing on or past Indian reservations. Litigation is costly, time consuming, uncertain in outcome, and once decided, can displace existing water users and provide only paper rights, not "wet water." The prolonged uncertainty clouds the validity of water rights for Indians and non-Indians alike, forestalling investment based on the availability of, and rights to water, thus hurting tribes, businesses, states and the nation.

As a result of this pending litigation, the previous administration undertook an aggressive program to negotiate settlements for the outstanding Indian water rights claims throughout the West. Secretary Lujan indicates that this policy will continue. Last Congress, three settlements were enacted into law --- the Salt River Pima-Maricopa in Arizona, San Luis Rey in California and Colorado Ute in Colorado. These settlements anticipated federal funding in FY 1990 of $76 million. However, in the FY 1990 budget request, there is only $15 million.

What do you anticipate the effect of underfunding these Indian water rights settlements to be on future negotiations?

Answer: We expect to continue to work toward settlements of legitimate Indian water rights claims to which the Federal Government is a party. It is important, however, for negotiators to be realistic in their expectations, particularly when budgets are highly constrained at the Federal, State, and local levels.

The three recently enacted water settlements (Salt River, AZ; San Luis Rey, CA; and Colorado Ute, CO/NM) commit the Federal Government to provide $113 million in FY 1990 and $284 million through FY 1994. For the foreseeable future, such commitments will be difficult to fully fund and will make it even more difficult to finance other meritorious water settlements.

Question: Would you consider it a disincentive for tribes to proceed with negotiating future water rights settlements if they are funded by a reorientation of the Bureau of Indian Affairs budget at the expense of other Indian programs?

Answer: Yes, if that is in fact the case. However, budgeting for Indian water rights settlements should be treated in the same manner as budgeting for other Federal programs. Such settlements should compete with other important funding priorities within the Department of the Interior as well as the Federal Government.

Question: Would you not agree that if these disputes proceed to judgment, funds for the damages found against the United States would come off budget, to fund Indian water rights settlements?

Answer: Claims against the Federal Government that proceed to final judgment are usually funded from the Department of Treasury's Claims, Judgments, and Relief Acts Fund. This fund is not "off budget," inasmuch as expenditures from it increase the Federal budget deficit.

Question: Do you anticipate an increase in the budget request for the three settlements enacted into law last Congress?

Answer: The Budget Agreement did not specifically address Indian water settlements, although the House Concurrent Resolution on the Budget assumed additional funding for the three authorized Indian water rights settlements.

Coolidge Dam

Question: Interior Department documents indicate that Coolidge Dam poses "a real and immediate hazard...to person and property" living downstream from this structure. However, it is my understanding that there is a difference of opinion within the Department as to which agency will assume the role of lead agency for the Safety of Dam modifications to Coolidge Dam. This intra-department conflict has resulted in a delay in undertaking the necessary modifications to make Coolidge safe.

Would you agree with the statement, "...that a real and immediate hazard exists to persons and property located in the downstream floodplain" from Coolidge Dam because a "failure of [Coolidge Dam] is possible and highly probable."? Would you also agree that a difference of opinion exists within the Department of Interior as to which agency will assume the role of lead agency --- Bureau of Indian Affairs or Bureau of Reclamation --- for the Safety of Dams modifications? Why is there disagreement within the Department on this issue? What will it take to resolve it? When do you anticipate a determination on this matter?

Answer: Because a hazard does exist and failure is possible, we have taken steps to reduce the danger of failure. The current reservoir elevation is approximately 25 feet below recommended operating level. The in-flow is considerably less than the irrigation releases so the reservoir elevation will be declining as the irrigation season progresses. This condition will not induce high hydrostatic pressures on the structure and the likelihood for abutment erosion is considerably reduced.

Coolidge Dam is included in the Bureau of Reclamation's Dam Safety authorizing legislation, but the dam is located on Indian land. An agreement was recently approved by the Secretary of the Interior identifying the specific roles of both BIA and BOR regarding funding for the repair of Coolidge Dam. In FY 1989, the BIA will provide $500,000 in FY 1989 and the BOR will provide $1.4 million for preconstruction costs. Beginning in FY 1990, the BOR will assume all remaining costs, estimated at over $40 million.

Question: In the Bureau's FY 1990 budget justification, there is $5.5 million for Safety of Dam programs? What amount, if any, of these funds are allocated for the Safety of Dams modifications to Coolidge Dam?

Answer: There is no funding for the Coolidge Dam modifications in the Bureau's FY 1990 budget.

Question: What determines budgeting priority for the Safety of Dams program?

Answer: The Interior Department's Dam Safety Task Force (DSTF) developed a Technical Priority Listing of all dams under Interior's responsibility. DSTF's initial analysis for funding priorities was confined to the dams in the high hazard potential classification. Each dam in the Listing is given an engineering factor score for deficiencies in the areas of seepage, hydrology, status and dynamic stability, liquefaction and other factors commonly used to assess the physical condition of a dam. The structures placing high on the Technical Priority Listing should be funded first and then in descending order.

Question: What priority does Coolidge Dam have relative to other BIA safety of dam projects?

Answer: At the present time, the BIA has 52 high and significant-hazard potential dams in the program and Coolidge Dam is number 19th in priority out of the 52 structures.

Question: What level of funding would be required to commence Safety of Dam activities on Coolidge Dam in FY 1990?

Answer: The Bureau of Reclamation has advised in the November 1988 Modification Report that a first-year funding of approximately $2 million will initiate the safety of dams activities for Coolidge Dam.

Divestiture of San Carlos Irrigation Project

Question: Could you please provide me with an update of the divestiture activities associated with the San Carlos Irrigation Project?

Answer: As a matter of clarification, the divestiture of activities involve the electric power distribution system of the San Carlos Irrigation Project, not the entire project, involving the power and irrigation functions. The inventory of the electric power system, in terms of physical plants, structures, and other features, has been completed by the Project, with in-house resources. There is ongoing the right-of-way research and verification to resolve any problems or difficulties that may arise involving the legality of the existing rights-of-way associated with the electric power distribution system. The project will be initiating an effort to determine the present-day replacement value of the electric power distribution system for use in the analysis of determining payback of the Federal investment in the divestiture process.

The Project advises that the present ongoing activities should be completed in six to nine months.

Question: In the FY 1990 budget request, is there sufficient funding to proceed with the divestiture of the San Carlos Irrigation Project in a timely fashion?

Answer: The FY 1990 budget did not request any funding to proceed with the divestiture of the electric power distribution system. On its own, the Project has undertaken and completed the physical inventory of the electric power system. In addition, the Project plans to conduct a research and verification of the Project's rights-of-way and make a determination of the present-day replacement value of the electric power distribution system. The BIA believes all costs associated with personnel relocations, rehirings, severance pay, and the reimbursement of the Federal investment in the electric power system should be borne by other sources.

Question: Could you please provide me with an anticipated timeline of activities associated with the divestiture of the San Carlos Irrigation Project?

Answer: Beyond what we have described above, the BIA is not engaged in any other activity relative to divestiture in the nature of having a timeline tied to it.

Tribal Fish Hatcheries

Question: As you know in FY 1990, Congress once again transferred several tribally operated fish hatcheries and fishery assistance offices from the Bureau of Indian Affairs to the Fish and Wildlife Service. In addition to this transfer, additional funds were included to properly manage these facilities. However, I see in this year's budget request, the tribally operated hatcheries again appear under the jurisdiction of the Bureau.

What is the rationale for the Bureau opposing Congress in its efforts to transfer these facilities to the Fish and Wildlife Service? Does the Bureau feel that they can better manage these facilities than the Fish and Wildlife Service?

Answer: Under the Self-Determination amendments of 1988, tribes will be afforded the opportunity to contract funds provided to all Interior bureaus for the delivery of services to Indians.

The Department believes that funding for these facilities should be provided through the budget of the Bureau of Indian Affairs because the primary benefits of the programs involved accrue directly to the tribes. The Service is charged with providing technical assistance. An "Agreement on Policy: Trusteeship of Tribal Fishery Resource," signed by the Assistant Secretaries for Indian Affairs and Fish and Wildlife and Parks in 1984, recognizes the Service as the Department's principal scientific authority on fishery matters and states that the Service shares with the Bureau the obilgation to assist in fulfilling the Secretary's Indian trust responsibilities.

Bureau personnel are not trained or equipped to manage these facilities. To the extent that tribes cannot directly provide for their own fish and wildlife resource management needs, the Bureau will continue to rely on the FWS for the delivery of services. Responsibilities for managing and developing Indian fish and wildlife resources, however, are most appropriately carried out by the tribes themselves, through the development of trained, professional tribal staffs who are accountable, not to federal agency personnel, but to the tribal governing bodies. The success of the Wildlife and Parks budget in promoting full tribal capability in the management of fish, wildlife and outdoor recreation resources is evidenced by the fisheries programs of the Northwest and Great Lakes tribes and the big game management programs of the Southwest tribes. We understand that the FWS is developing a training program in conjunction with the Fisheries Academy at Leetown, WV, to provide training opportunities for participating tribes.

Question: Has the Bureau consulted with the respective Tribes to determine their thoughts on who should manage the fisheries and fishery assistance offices? If so, what has been the response?

Answer: Tribes have not been consulted formally about who should manage these fisheries facilities because most agree that it should be the FWS. Several tribes receiving services through these facilities, however, have expressed a preference for retaining the option to contract portions of facility operations funds to develop tribal resource management staffs and operations. It was in response to such requests that $187,000 of the increase initially proposed for the Parker and Pinetop offices in FY 1989 was transferred instead to the Colorado River, White Mountain Apache and San Carlos Apache tribes, and that funding for the Service's Olympia Fish Health Lab was transferred to the western Washington tribes in FY 1988.

The Shoshone and Arapahoe tribes may wish to contract the $171,000 in federal assistance funds currently earmarked for the Lander, Wyoming office to begin implementing their new tribal game code in FY 1990. The Navajo, Zuni, Jicarilla, San Ildefonso, San Juan, Santa Clara, Picuris and Nambe tribes have already entered into P.L. 93-638 contracts with the Bureau to begin implementing their own fisheries programs, and are exploring options for expanding tribal operations, including new fish rearing and stocking programs to better meet their needs. The Navajo Tribe recently completed construction of a tribal fish hatchery, and the Zuni and Santa Clara tribes are actively exploring fish rearing feasibility options on their reservations. Some of these tribes are currently using their own resources to purchase fish more suitable for stocking into their lakes than have been available for the federal fish hatcheries.

QUESTIONS SUBMITTED BY SENATOR JAMES A. MCCLURE

General Budget

Question: While your total request for appropriated funds in FY 1990 is essentially flat with a proposed increase of 1 percent above the FY 1989 enacted level, you have requested a $22 million increase (+26 percent) in construction, a $15 million (+115 percent) increase in Miscellaneous Payments to Indians, and an $11 million (+330 percent) increase in Guaranteed Loan Subsidies (pg. 3). These figures are almost completely offset with a decrease of $39 million (-4 percent) in Operations. What instructions were you given in formulating this budget from the Department? OMB?

Answer: The Department requested the Bureau to submit a budget at three funding levels: 90%, 100% and 110% of the amount included in the President's FY 1989 budget request. OMB instructions are provided at the Departmental rather than the Bureau level.

Question: The FY 1990 request for BIA Education programs is $192 million (20 percent of the total request) which I believe is designed to benefit about 40,000 Indian students. The remaining $761 million or 80 percent of your budget is designed to benefit 900,000 Indians. I don't want to argue about the need for education, but does a skewed budget like this really address the needs of the Indian community?

Answer: The Bureau believes that the $192 million is needed to adequately address the needs of the students who are identified as eligible for the Indian Student Equalization Program (ISEP) formula funds.

Indian School Equalization Program

Question: You have requested an additional $4.6 million in FY 1990 for salary adjustments for teachers and counselors (pg. 36). This increase is required by the Indian Education Amendments of 1988 which provide a three year phase-in to increase salaries to the rates paid by the Department of Defense. The increase will also allow the BIA to bring teacher salaries more in line with nearby public schools. Can you briefly explain the salary situation between BIA schools, the DOD and other public schools?

Answer: Presently the average salary for Bureau teachers counselors, and home living specialist is $23,340. The average Department of Defense (DOD) salary for overseas schools is $31,545. According to the U.S. Department of Education, Center for Education Statistics, Digest of Education Statistics, 1988, the National average for teachers in elementary and secondary public schools is $26,551.

Question: Are there areas where DOD teacher salaries are well above nearby public schools?

Answer: The Bureau does not have salary information about specific DOD school locations.

Text Books

Question: No funds are requested for textbook upgrade in FY 1990. According to the justification, Bureau standards for textbooks have been met according to data received from site visits by the Standards Task Force (pg. 36). The FY 1989 justification indicates that in 1986, 63 percent of the schools visited lacked current textbooks. If we were to go back to those same schools, what percent would have current textbooks?

Answer: The task force has validated the compliance reports from last school year and they have been received in Central Office for review. We have not analyzed the data at this time and are unable to give a percentage.

Question: Does the data received from the task force indicate that Bureau schools are on a schedule to replace books or has the upgrade actually taken place?

Answer: Bureau operated schools are on textbook upgrade schedules.

Question: What was your request for textbooks of the Department? Of OMB?

Answer: No funds were requested in either the Department or in the OMB submission.

School Boards

Question: The Indian Education Amendments of 1988 transferred funds for School Boards to the Indian School Equalization Program (pg. 37). The 1988 amendments authorize a set-aside rather than direct funding for the school boards. The new set-aside will increase the amount for school boards from $1.2 million in FY 1989 to $1.5 million in FY 1990. Given the option, would you have requested a 23 percent increase in this program? Is this program really that beneficial?

Answer: The Bureau transferred $1.2 million of funds for school board training and school board expenses to ISEP. The set-aside for authorized training is 0.133 percent of the total amount appropriated and represents a decrease in funding for school boards training. The training program has been beneficial for some school board members; however; the turn-over among members precludes any long term realization of the benefits of such training.

The school board may reserve an amount that does not exceed the greater of $4,000 or 1 percent of the allotted funds to the school, for their expenses. Expenses generally include travel to meetings, membership in organizations and some local training of the community members.

Solo Parent Program

Question: The Solo Parent Program at the Sherman Indian School and Flandreau Indian School, provides single parents with the opportunity to complete their high school education while living at the school with their children. In addition to the regular curriculum, the parents are instructed in home management, child development and child care.

For FY 1990, you have requested a $25,000 increase for this program to $133,000. Can you provide some detail on this requested increase? Will the funding requested in FY 1990 meet the program requirements? Are these schools the only schools receiving this type of funding? If so, why?

Answer: The additional funding covers the increased costs which the schools must pay for child care, formula and disposable diapers. The students in these programs also generate ISEP funding which covers the cost of their education. Flandreau and Sherman are the only two schools which operate a solo parent program. They both have adequate facilities to ensure the safety of the children and also provide a degree of privacy for the parents so that they may practice home management skills. Further, these two schools are sufficient to meet all the requests which the Bureau receives for placement.

Technical Support-Agency and Area Offices

Question: In FY 1998, the Bureau began assessing and evaluating the technical support staffing. Standards have been established with respect to ratios of employees to the number of schools supervised, tribes serviced and programs monitored (pg. 39).

Management initiatives are being pursued in FY 1989 which will streamline delivery systems, improve cost effectiveness, and increase efficiency of program operations. These initiatives may include consolidation of areas and agency offices and functions. It sounds as if you looked for a cut and then found a justification. Is a 19 percent funding decrease achieved through increased efficiency really attainable in one year?

Answer: The planned decrease is attainable in one year.

Question: Is there really that much fat in your overhead? Are efficiencies really being attained with a 19 percent funding decrease and a 10 percent decrease in FTE's?

Answer: The basic field organizational structure for Education was originally established in 1980, and there has not been a major restructuring although the operational needs have changed as a result of the emphasis on schools operated under contracts and grants. There are more effective and efficient operational structures. Historically, approximately 42% of the funds for Agency and Area Offices have gone to area education offices which only serve 23% of the total student population, and only 8% of the student population in BIA-operated schools. Some of these offices have staff capable of supporting operations much larger than currently needed. Many of the functions currently performed by area offices could be transferred to agency locations without a substantial transfer of staff. Presently, we have four area operations (two of which are in the same state) which could be combined while offering comparable service at a reduced operating cost.

We also have six agency offices that serve no more than three schools. In some cases these offices are located near each other. Thus, they are ideal candidates for consolidation which would reduce operating costs without a loss of service.

We have taken action to freeze the filling of vacancies and will continue this initiative until adjustments in the structure have been completed. These are some of the management actions we anticipate pursuing in order to achieve a more cost effective operation while ensuring that we do not decrease service.

Substance/Alcohol Abuse Program

Question: You have requested a decrease in the Substance/Alcohol Abuse Program of $491,000 (-20 percent). The justification indicates that the decrease is necessary because the Bureau has been unable to fill positions in this area due to a nation-wide shortage of credentialed counselors.

How long have you been having the recruitment problem? What is the maximum number of counselors that can be funded at the FY 1989 level and how many counselors were funded in FY 1988? How can you reduce the funding by 20 percent yet not the FTE's?

Answer: The Bureau has been experiencing a problem of hiring counselors for the past three years, especially in alcohol and substance abuse because colleges and universities are not graduating students who meet the requirements for licensed counselors. The maximum number of counselors that could be funded in FY 1989 is 72 with an average salary of $33,000. These funds are also distributed to contract schools, however, and their personnel are not reflected in the Bureau's FTE numbers. Only six Bureau FTE were actually charged to this program in FY 1988, therefore, the estimate of 20 FTE is more than a 300 percent increase over the actual FY 1988 level.

Johnson O'Malley

Question: Public Law 99-228 changed the definition of Indian students eligible for service under JOM from "an individual with at least 1/4 degree of Indian blood of a federally-recognized tribe" to "a member of a tribe, or a descendent of a member of a tribe, who has at least 1/4 degree of Indian blood of a federally-recognized tribe."

In response to a BIA estimate that the service population would increase 13 percent as a result of this law, Congress added $2.6 million in FY 1989 for the JOM program. The FY 1990 justification indicates that the service population only increased 2 percent. Can you explain the difference between the 13 percent estimate in FY 1989 and the 2 percent actual?

Answer: There was 13 percent increase in the student count in FY 1988 over the 1987 count. In FY 1989 there was a two percent increase over the 1988 student count.

Question: Please provide for the record the amount of funds necessary in FY 1989 to fund the increased service population at the same level as FY 1987?

Answer: There are no additional funds needed because in FY 1987, the per pupil amount was $95.00. The FY 1989 per pupil amount is $98.87. The appropriation in FY 1987 was $20,250,000. The appropriation in FY 1989 is $23,000,000.

Post Secondary Schools

Question: Is there a reason you estimate the number of graduates from Haskell Junior College to increase 38 percent and Southeastern Institute Polytechnic Institute to increase 51 percent in the Spring of 1990?

Answer: There are only two Post-Secondary Schools operated by the Bureau of Indian Affairs, Haskell Indian Junior College and SIPI, Southwestern Indian Polytechnic Institute. The number of graduates is expected to increase both schools are now more actively recruiting students and offering counseling programs designed to keep students in school.

Question: Is there a reason these institutions are more successful than the others?

Answer: They continue to experience a success rate because of the because of the expanded programs they now offer and the continued effort by school staff to address the needs of the Indian community as well as the vocational and technical fields. The tribally controlled community colleges receive grants from the Bureau, but they are operated by individual tribes.

Tribally Controlled Community Colleges

Question: The Indian Student Count (ISC) is expected to increase from 3,793 in FY 1988 to 4,483 in FY 1989 for the twenty Title I colleges receiving funds from the Tribally Controlled Community Colleges program. At the same time, the number of graduates is expected to decrease from 449 in FY 1987 to 419 in FY 1988. Have you taken a look at the reasons behind this declining graduation rate?

Answer: The estimated ISC and graduation figures are provided by the individual colleges.

Question: Have you analyzed the students at these schools to see if some have students stay longer than two or three years?

Answer: The Bureau does not collect data on individual students at the schools. In general, many of the students who attend the TCCC's are older students and they have personal responsibilities which prevent them from carrying a full load of classes (12 credit hours). As a result, some of them may remain in school longer than two or three years.

Question: In FY 1990, there will be twenty-two eligible colleges instead of twenty and the funding is proposed to decrease 5 percent to $8.0 million. At the same time the student count for FY 1989 is 18 percent above FY 1988.

Are these colleges as aggressive as they could be in their search for funds outside the Federal government? How much of the declining graduation rate do you attribute to the funding level?

Answer: The TCCCs as a group are aggressively seeking outside funding sources, however, their view is that the private giving should be used to enhance programs rather than using the funds to replace Federal grants.

Water Rights

Question: During the 100th Congress, three Indian water rights settlement acts were enacted late in the 100th Congress. These included the Salt River, Colorado Ute, and San Luis Rey Settlements. The FY 1990 increment for these settlements is $97 million. The request from the Administration, however, is $15 million.

The FY 1990 budget request indicates that a policy determination was made on these settlements and the significant cost of these settlements requires an incremental funding approach. I am very interested to see your strong reaction to request funds for an authorization. Have you made a comparable effort to request funding for other, non-water right, authorizations?

Answer: The Bureau has made a comparable effort to request funding for other, non-water rights, authorizations these are set forth under the Miscellaneous Payments to Indians. They include, White Earth Reservation Claims Settlement Act, Old Age Assistance Claims Settlement Act, Gila Bend Indian Reservation Lands Replacement Act, and Payments for the Aleutian and Pribiloff Island Restitution Act.

Question: What discussions did you have with OMB relating to the funding of these water rights settlements?

Answer: In December 1988 OMB advised the Department that $15 million could be included in the Bureau of Indian Affairs' budget while remaining within the

Department's FY 1990 target. This level of funding was accepted and was distributed equally among the settlements. There was no discussion about outyear funding. In this regard and as a preliminary to FY 1991 budget formulation, discussions have been held within the Department relative to funding of the three settlements. While the Department intends to implement, as expeditiously as possible, these and other settlements which may be enacted, timing of outyear funding to meet the total obligations of the acts is directly dependent upon overall Department funding constraints and priorities.

Question: If OMB requires agency heads like you to find room in your budget for settlements, what is your incentive to settle any claims?

Answer: The incentive to settle these claims comes from the Department's determination to take proactive role in the formulation of future settlements which resolve Indian water rights claims with deference to current budgetary constraints. In addition, the bureau remains confident that a workable budgetary approach can be developed within the Department which can assure resolution of Indian water rights settlements without adversely affecting other priority programs within the Department.

Old Age Assistance Payments

Question: Funds appropriated in FY 1988, FY 1989 and requested FY 1990 will be used to begin payments to individuals entitled to compensation under the Old Age Assistance Claims Settlement Act. The 73 percent reduction in the FY 1990 request is because the Bureau anticipates that previously appropriated funds will be available in FY 1990 for this purpose. How much is available for the purpose in FY 1990?

Answer: Approximately $3.4 million will be available from carryover funds.

Question: How much do you anticipate obligating in FY 1990?

Answer: It is estimated that $1 million will be obligated in FY 1990.

Question: Are you having trouble identifying individuals? If not, why are you requesting additional funds for travel?

Answer: The Bureau anticipates some problems in locating non-Indians and in retrieving fiscal data from the Federal Records Centers. The additional funds for travel purposes will assist in resolving these problems.

Tohono O'Odham Nation

Question: The Gila Bend Settlement requires that the Department of the Interior pay the Tohono O'Odham tribe a total of $10 million in FY 1988, FY 1989, and FY 1990 for the 9,880 acres in the Gila Bend Indian reservation which was made in October of 1987. The terms of the settlement required that the $10 million payment be completed by October of 1989. What will be the implications on this settlement if the appropriation is not complete by October? Do you have the authority to use existing funds?

Answer: Section 9(c) of the Gila Bend Indian Reservation Land Replacement Act, P.L. 99-503, provides that the assignment of land and waiver and release of clauses included in the October 13, 1987, Agreement Between the United States and the Tohono O'odham Nation to Provide for the Implementation of the Act of October 20, 1986, shall not take affect until the full amount authorized to be appropriated has been paid to the Tribe. The Act states that certain amount shall be paid in FY 1990, but does require that the payment be made in October 1989. We do not have the authority to use funds other that those appropriated for the Bend Settlement Act.

Question: When this settlement was made, was there any discussion of a declaration of taking on the property? Isn't a taking a way into which the Claims and Judgements fund can be tapped?

Answer: The Act did not effect a taking because all rights being granted by the Tribe were voluntarily assigned/released pursuant to the above referenced agreement. If a taking had been decided by the U.S. Court of Claims, the source of funds would have been determined by the Court.

Aleutian and Pribilof Island Restitution

Question: The Aleutian and Pribilof Island Restitution Act authorizes the Department of the Interior to enter into an agreement with the Aleutian/Pribilof Island Association. The agreement is to identify, locate, and compensate the Aleut residents for the loss of personal, real and community property damaged or destroyed during World War II.

In FY 1990, $300,000 has been requested to initiate the program. These funds will be used to identify eligible Aleuts, obtain a recommendation for a trustee to begin an inventory and assessment of the damaged church property. Was an authorization required for you to do this work?

Answer: The Act requires advance appropriations prior to carrying out the authorized activities.

Question: What is the total amount anticipated for this effort?

Answer: This Act specifically authorizes funds for a variety of purposes. An estimate of funds specified and in the Act including but not limited to the per capita distribution, administrative costs of the Department, and administrative and legal expenses of the Aleutian/Pribilof Island Association (A/PIA) is $27,000,000.

Question: How does the statement on page 274 indicating that these funds will be used for administrative and legal expenses compare with the uses identified on page 275?

Answer: The statement on page 274 is compatible in that the administrative fees which are anticipated for the A/PIA will be those incurred in performing the tasks on page 275. These are to identify the eligible individual Aleuts, to obtain recommendations for trustees in the villages, and to begin an inventory and assessment of the damaged church property.

Miscellaneous Payments to Indians-General

Question: The number of full time permanent employees funded in the Miscellaneous Payments to Indians account is expected to increase from 6 in FY 1988 to 12 in FY 1990. Please allocate the full time permanents to the various programs and performances.

Answer: There are six full-time term positions in the Old Age Assistance Program and six full-time term positions in the White Earth Act Administration Program. In these cases, the term is not-to-exceed four years.

Question: Will the one thousand dollar travel increase of FY 1990 listed on page 277 be adequate to meet the need for the Old Age Assistance Program stated on page 275?

Answer: The one thousand dollar travel increase for FY 1990 will be adequate to meet the need of the Old Age Assistance Program.

Miscellaneous Payments to Indians

Question: The justification for funds for Miscellaneous Payments to Indians is comparatively light. It reads as if these payments are considered permanent indefinite appropriations by the Bureau. Simply because the funding is authorized does not mean that the justification should ignore explanation of the funding. Do these payments go through the same review process as the other parts of the BIA budget?

Answer: Payments authorized by specific legislation, along with other bureau programs, are considered for funding within the bureau's target.

Question: In the future, please include additional information on the funding requests in this area.

Answer: The Bureau will provide additional justification in the future.

Revolving Fund for Loans

Question: The justification states that $228 million has been loaned from the Revolving Fund for Loans. The justification also seems to indicate that $66 million of that amount has been to businesses and the remainder to individuals. Is that accurate?

Answer: No. During the life of the program $179 million has been lent to tribes and corporations, $3 million to cooperatives, $6 million to tribes for expert assistance, $9 million to credit associations for relending to their members, and $31 million direct to individuals. With the exception of expert assistance, and a few loans for education and housing, all revolving fund loans must be for the establishment, acquisition, or expansion of profit-making business.

Question: How has the loan ratio between businesses and individuals changed over the years? Are you loaning more for economic development or less?

Answer: Loans, whether to tribes or individuals, are for profit-making businesses. A few loans are made each year for housing and education, but not as many as in the past since there are other sources individuals can usually qualify to receive. The amount of loans made is limited to the amount collected into the fund. Over the last three years direct loans were made totaling $13.9, $7.4, and $8.6 million.

Question: The justification states that about 11 percent of the amount of total loans has been written off and about 15 percent of the loans outstanding are delinquent. How would this amount compare with the SBA? A bank?

Answer: We do not have any figures comparing the SBA program since its inception. However, in the Budget Appendix for the last three years, their Business Loan and Investment revolving fund shows a write off of $392 million on a $3.5 billion balance for FY 1986, $411 million in FY 1987, and $366 million in FY 1988.

In relation to how this amount compares with a bank, we would expect that because of the higher risk loans that we make, a bank's percentage for write offs and delinquencies would be lower. One banker told us that 1/2 to 1 percent would be normal for write offs a year and less than 7 percent would be normal for delinquent loans. This, of course, would vary according to the types of loans in the bank's loan portfolio. Agricultural loans would in all probability have a high delinquency rate.

Question: Would the SBA write off any of your delinquent loans?

Answer: The bureau's program finances projects that SBA would turn down as having a higher risk than normal, since we are the lender of last resort for Indian tribes and individuals. As such, with a much smaller client base, we probably would tend to work with and carry loans for a longer period than SBA.

Question: Over the history of the program, how do the new loans compare to the old loans? Are the new loans more delinquent than the old loans?

Answer: Of the 47 tribal promissory notes delinquent as of September 30, 1988, half of them are for loans made prior to 1980.

Question: Have the project proposals changed over the course of the program?

Answer: In the early years of the program, the emphasis was on tribal relending programs. One loan would be made to a tribe for a variety of purposes. The tribe would use the funds for tribal enterprises and relend some to individuals for business, housing, and educational purposes. This was primarily to give tribes the opportunity to function as business entities, operating the program with profits made from the interest collected, and generally was the only source of funds available to the tribes. Income from all tribal sources was pledged as security which later had the effect of limiting the tribe to borrowing only from the bureau. As more economic resources from other agencies and the private sector became available, most tribal loans were rewritten taking specific assignments of income. When the Indian Financing Act was passed in 1974, the emphasis was changed to utilizing private sector funding under the guaranteed loan program. The Revolving Fund is used where an applicant cannot receive funding from other sources.

Question: How do the loan amounts compare geographically?

Answer: The following shows the total amount of direct loans made over the past three years and the outstanding loan balance by Area Offices:

	Made	Outstanding
Aberdeen	$5,673,899	$13,475,468
Albuquerque	3,013,217	11,691,866
Anadarko	466,406	2,030,536
Billings	5,393,661	9,975,065
Eastern	1,211,053	3,336,423
Juneau	3,480,609	13,188,429
Minneapolis	950,812	9,431,779
Muskogee	2,154,389	4,647,080
Navajo	0	2,700,000
Phoenix	1,235,000	9,808,936
Portland	5,859,482	18,235,093
Sacramento	413,977	1,954,771
Total	$29,851,505	$100,475,446

Special Tribal Courts

Question: You have requested a decrease of $500,000 (-24 percent) for Special Tribal Courts. The justification states that as tribal courts mature and their staffs become more experienced, a decrease in requests for needy tribal court funding is anticipated. Can you identify any workload data indicating a decrease?

Answer: No, we cannot at this time identify workload data indicating a decrease. However, based on the funding that has been made available to these courts and the improvements that will result from its use we anticipate that by FY 1990 there will be a decrease in the need for this type of funding.

Welfare Assistance Grants

Question: The FY 1990 request for Welfare Assistance Grants is $2.3 million (3 percent) below the FY 1989 enacted level. This decrease includes anticipated savings in the cost of providing institutional care for adults in the State of Arizona and anticipated savings in General Assistance as individuals leave the welfare roles as a result of skills developed in the Tribal Work Experience program and the Employment Assistance Readiness Net. Of the $2.3 million decrease, how much can be attributed to the Arizona Health Care Cost Containment System (AHCCCS) which is being phased in during FY 1990?

Answer: While the BIA has no blanket assurance that any Indians will be eligible for the AHCCCS long term care program, through the many coordinating meetings held with AHCCCS and the tribes over the past 2 years, it appears that some elderly or severely handicapped Indian persons in off-reservation, licensed, and Medicaid certified nursing homes should meet the eligibility guidelines for AHCCCS. These persons have been referred to AHCCCS, who has until September 30, 1989 to make a decision on these applications. We anticipate that up to about one-third of our present adult care caseload will be deemed eligible. Estimates given by the Phoenix and Navajo Area Offices indicate that 130-140 Indians presently receiving Adult Care Services through BIA will be approved by AHCCCS for long term care by the end of FY 1989. This gives the expected range of decrease to be from $3.3 million (based on the 1/3 estimate) to $1.7 million (based on caseload reductions as estimated by the Area Offices).

Question: Will there be additional savings in FY 1991 and beyond?

Answer: There will be additional savings in FY 1991 and beyond in that persons who meet AHCCCS guidelines will be served through that program and not by the BIA.

Question: Since the AHCCCS is being funded under the Social Security Act, will the overall funding decrease or increase?

Answer: Since the funding received by the State of Arizona for the AHCCCS program is passed through the Health Care Finance Administration (HCFA), rather than through the BIA, the BIA has not been involved in funding estimates for that program. To the extent that the HHS requires matching funds from the State, the overall costs to the Federal Government will decline.

Question: How will the services change in FY 1990?

Answer: By FY 1990 the waiver received by AHCCCS to allow for up to nine months to make an eligibility decision for Indians referred to that program will end, so basic eligibility decisions regarding the transfer of an Indian under BIA care to AHCCCS should be resolved. This will mean that referral of Indians to AHCCCS will flow in the same manner as referral of the general public.

Question: Why isn't this a base adjustment?

Answer: Due to the complex nature of the transition from the BIA Adult Care Program to the AHCCCS program, it is difficult to assess the final effects on the base funding.

Central Office Operations

Question: The FY 1990 budget includes an additional $241,000 (+18 percent) in the Law Enforcement Program to address the Administration's concern over the high incidence of child abuse and neglect and drug abuse in Indian country.

How much of the FY 1989 funds are being allocated for this effort?

Answer: In FY 1989, $506,000 was allocated for this purpose.

Police Academy

Question: You have requested an increase of $157,000 (+16 percent) for the Police Academy (pg. 79). This increase will be used to provide special training on alcohol and drug abuse to bureau and tribal law enforcement personnel. Two new courses will be offered: a five-year update and refresher course for police officers and a criminal investigator follow-up course. Should these courses have been offered in the past?

Answer: The Police Academy has been adding new courses for police and criminal investigators for the past two years. Tuition costs were increased in 1989 based on contractor costs. Most of the courses offered on alcohol and drug abuse were funded by appropriations authorized by P.L. 99-570, the Anti Drug Abuse Act of 1986. The two new courses projected are designed to update knowledge of legal decisions and new techniques which impact the law enforcement programs. Although all law enforcement officers are required to take 40 hours in-service training each year, there is no or coordinated comprehensive refresher course designed to cover all needed areas.

Question: Do all of your courses cost $75,000 each?

Answer: Course costs at the Academy vary according to length of course, subject matter, special equipment needed for instruction or labs and room and board. The costs are pro-rated by the number of students attending each class. There are also cost development costs for the Federal Law Enforcement Training Center. The average cost for a two week course at the police academy is approximately $15,000 for twenty four students. There are over one thousand (1,000) BIA and tribal police and investigators who would be eligible for this training. We would offer the training over a number of years as space at the academy permits.

Substance/Alcohol Abuse

Question: The Law Enforcement program includes an additional $337,000 (+34 percent) for the Bureau's Marijuana Eradication and Reconnaissance Team (MERT) to hire additional staff and to increase helicopter overflights by 635 hours. How many hours of overflights are being flown in FY 1989? What will really be accomplished by additional overflights?

Answer: In FY 1988 MERT flew a total of 463 hours in fixed and rotary wing aircraft during marijuana eradication activities (368 hours in California; 10 hours for rappelling training for MERT staff and 85 hours in Washington State). As a result of these effort, MERT eradicated 72,322 marijuana plants (34% of all statistics reported by DOI); effected 53 arrests (51% of all arrests reported by DOI); and seized 43 weapons (60% of all DOI weapon seizures).

In FY 1989, MERT has planned a total of 851 flight hours. MERT flew 83 hours during eradication operations in northern California in October. With the beginning of the spring growing season, the remaining 768 hours are planned for 45 hours in rappelling training; 150 hours for Washington State and Idaho and the remaining 575 hours for overflights in southern and northern California, Montana and Oregon.

In the past, eradication personnel in aircraft have received ground fire from marijuana cultivators, particularly on the Hoopa Valley Indian Reservation in northern California. For that reason, it is necessary to operate two helicopters in each given operational area. One is used to insert eradication personnel in a given target area and the other unit is used to provide armed cover and security for personnel rappelling into the gardens. The additional flight hours programmed for FY 1990 will allow us to broaden our eradication overflights to Indian country located in the States of Nevada, Oklahoma, North Dakota, South Dakota, Wyoming, North Carolina, Florida, Arizona and New Mexico. We plan to hire and train additional "spotters" who will assist law enforcement personnel with the technical aspect of aerial marijuana detection.

Some of the additional flight hours will be used to secure aircraft which will provide aerial surveillance during "hard" drug undercover narcotics investigations. Attention will also be given to border interdiction overflights on reservations which are adjacent to the Mexican and Canadian borders. All border interdiction activities will be coordinated with the U.S. Customs Service and the U.S. Border Patrol.

Forest Development

Question: When the Forest Development program was initiated in FY 1977, the target date for elimination of forest development backlog of record by 1996. The FY 1990 budget proposes to reduce the Forest Development program by $3.1 million (-39 percent) and shift the target data to 1997.

What conclusion should I draw when you propose a 39 percent decrease in funding for a program, slip an accomplishment date by one year and not propose to reduce the number of FTE's? Aren't there just going to be a bunch of people sitting around without adequate funds to do their jobs?

Answer: The special forest development program was initiated by Congress in FY 1977 to eliminate the backlog of commercial Indian forest lands that required some sort of silvicultural treatment(s) to restore them to the full productive capacity of the forest environment. Approximately 1,006,705 treatable acres were identified and became the "backlog of record". The majority of the Forest Development program is operated under contract by tribes and therefore would show no related FTE in the budget. The Bureau's budget request for FY 1989 included $5 million and 70 FTE for the Forest Development Program; and the FY 1990 request for 64 FTE is based on the actual FTE used in this program in FY 1988.

Question: How do the forest development "backlogs of record" differ from the backlogs of today?

Answer: The forest development backlog of record is the remaining acres to be treated after the annual acres treated (eliminated) are subtracted from the acres remaining to be treated at the beginning of the year. The backlog of record was revised in FY 1987 by comparing and reconciling two separate accomplishment reports. The backlog of record (untreated acres remaining) on October 1, 1987, was 569,687 acres.

Forest Products Marketing Assistance

Question: In FY 1990, you have again requested $338,000 for the Forest Products Marketing Assistance program. Expanded markets are expected to produce greater profits and more employment for timber tribes. Is the fact that you have requested FTE's for this program for the first time in FY 1990 a measure of its success?

Answer: Marketing assistance provided by BIA staff has contributed to the success of several tribal business-related efforts in the last two years. BIA staff expertise is also supporting several other tribal projects that could expand forest product markets or increase production. These marketing experiences, however, are not the basis for our request for FTE for the marketing assistance program. Rather, our request is an administrative adjustment to place the FTE with the appropriation.

The marketing assistance program is expected to help increase the number of Indian business successes and to help the tribes achieve self-determination. As the benefits of the program are more fully realized, we expect additional requests from the tribes for marketing assistance. This increased emphasis on marketing of forest products will require the attention of skill, full-time BIA marketing staff.

Question: What is the optimum level of funding?

Answer: The current funding level of $338,000 is adequate to meet short-term marketing assistance needs.

Offer vs. Harvest

Question: I don't know if it is a compliment, but the Bureau has consistently accomplished something that the Forest Service hasn't. For the past three years, you have requested funds to offer more timber than is being harvested. How do you manage to get that through OMB?

Answer: Each year the Bureau of Indian Affairs prepares Indian timber for sale on the open competitive market or for sale to tribal enterprises at the appraised rate. Timber sale preparation may take from two to three years and sales may be in operation for up to five years. To be a prudent manager the BIA should present for sale a volume of timber which approaches the combined tribal Annual Allowable Cuts, keeping in mind the desires of the Indian people.

When a tribe requests a timber sale we attempt to comply, if we have the available resources. Until a sale is advertised we are unable to determine if the sale will be successful. Therefore, we believe that the BIA should present more timber for sale than is actually sold. Any timber remaining unsold may be offered the next year with little added effort.

Question: Why do you estimate employment generated income to decrease in FY 1989?

Answer: The reduced employment generated income estimate figure of $271 million for FY 1989 is in error. The correct estimated figure should be approximately $400,000,000 based on our projected increase in volume harvested.

Question: How are you going to accomplish that sales level if the funds for Timber Sales Administration are decreased?

Answer: The number of timber sales prepared and sold can more directly be tied to the timber market than can other functions within the forestry program. Production will continue to increase even with fewer dollars if the tribes desire more timber be sold.

Noxious Weeds

Question: FY 1988 was the first year of the Bureau's noxious weed control program. In FY 1989, $330,000 was appropriated for this program and is being used to control 35 percent of the priority areas. You have requested an increase to $730,000. How will you use this increased funding level?

Answer: The spread of noxious weeds is a serious problem on Indian reservations. In FY 1988 the BIA requested funding to attempt a program to reduce the spread of these weeds. This control program was concentrated in the Billings and Aberdeen Areas where noxious weeds have created a serious economic problem. Limited funding was provided to the Portland, Phoenix and Albuquerque Area Offices where the problem is not as severe.

The BIA also has undertaken a program to develop a listing of the most serious noxious weed species from a control and economic loss standpoint. The results of this analysis will be completed by the Noxious Weed Task Force and a copy will be made available in late April, 1989. Preliminary results of this study indicate there are approximately 3.5 million acres of trust lands infested with one or more species of noxious weeds. Based upon these preliminary findings the BIA requested an increase for the FY 1990 noxious weed program in the amount of $400,000 for a total of $730,000.

Additional funds will be utilized to control the spread of noxious weeds, with particular emphasis in the northern Great Plains where leafy spurge (Euphorbia esula) knapweed (Centaureau spp.), and dalmation toadflax (Linaria dalmatica) have become a serious threat to the continued agriculture economy on several reservations.

Question: Please provide for the record a state by state breakdown of the use of FY 1989 and proposed use of the FY 1990.

Answer: The FY 1989 funding will be allocated as follows:

Montana	$160,000
South Dakota	50,000
North Dakota	110,000
	$330,000

FY 1990 funding: Funding levels by state will be available upon review and acceptance of the Task Force's Final Report.

National Indian Gaming Commission
Staff

Question: The National Indian Gaming Commission has been established to regulate and monitor class II gaming (bingo) conducted on Indian lands. Numerous Indian tribes have become engaged in or have licensed gaming activities on Indian lands as a means of generating tribal government revenues. The Commission was formed to "shield tribes from organized crime and other corrupting influences, to ensure that they are the primary beneficiaries of the gaming operations, and to assure that gaming is conducted fairly and honestly by both the operators and players."

You have requested $2.0 million to cover "start-up costs" of the National Indian Gaming Commission. Of this amount, $393,000 is for salary and benefit costs of the five staff members. If these are "start up costs," what do you anticipate the funding requirements will be when the Commission is operating at full capacity?

Answer: The annual cost may reach $7,000,000.

Question: Why do you feel $78,500 is an appropriate compensation for the staff of the Commission?

Answer: The grades of the Commisioners and the executive staff were established in the legislation.

Question: Can you elaborate on the anticipated use of the $1.4 million requested for other expenses?

Answer: We cannot be more specific at this time. Following the appointment of the Commission, the drafting of regulations, and the hiring of staff, the Department will be better able to respond.

Question: The justification indicates that the Commission will establish a schedule of fees to be paid to the Commission annually by each regulated class II gaming activity. These fees will be used to offset the expenses of the Commission. The Act, however, does not allow the fees being imposed to exceed $1.5 million. If the Commission's expenses can be covered by the fee, do you feel there is any reason to have the Federal government involved?

Answer: The fees will cover only about 20 percent of the annual estimated cost of the Commission when it is fully operational.

Office Of Construction Management

Question: The Office of Construction Management has the responsibility for assisting the bureaus and offices of the Department in improving their performance in planning, designing, constructing and operation facilities. Since 1978, this program has focused its efforts on the BIA. In FY of 1987, the role of OCM was expanded from oversight and assistance activities to direct program management of BIA's facilities program.

The original budget for the Department of the Interior included a funding request for a new school for the Couer d'Alene Tribal School in Idaho. I note that the final budget displaced funds for the school and replaced it with funding for a school in South Dakota. Portions of the South Dakota school have been condemned and pose safety hazards to the 700 students and staff. By comparison, the enrollment at the Couer d'Alene school has declined from 88 in 1984 to 43 today. How could the Pine Ridge school rank below the Couer d'Alene school in your original budget submission?

Answer: At the time the original FY 1990 ranking was developed, in March 1988, the application materials submitted by the tribal entities were evaluated, based on established ranking criteria, and the findings of the New School Construction Evaluation Committee were that Coeur d'Alene school had the second highest percentage of unhoused students. Therefore, this percentage of unhoused students represented a high priority consideration for classroom space in comparison to Pine Ridge school.

Question: What information was used to make the change in the final budget?

Answer: Conflicting enrollment figures for Coeur d'Alene school's current and projected enrollment surfaced just prior to the budget submission, as well as conflicting reports regarding seats available at nearby public schools. The application was prepared primarily by the Coeur d'Alene Tribal School, with supporting resolutions from the Coeur d'Alene Tribal Council and the Coeur d'Alene Tribal School Board. Site validation studies are required for all top-ranking new school construction projects prior to final consideration for funding. The site validation study of the Coeur d'Alene school was not completed at the time of the final FY 1990 budget submission.

Question: Do you anticipate an influx of students into the Couer d'Alene school? Why is this school still number two on the priority list? What is number three?

Answer: A contract validation study is underway, with a final report due in early May. This study will deal with enrollment data. Based on the validation study, a final recommendation on new construction at Coeur d'Alene school can be made. Based on the ranking of the New School Construction Evaluation Committee, Coeur d'Alene school was number two, and Oglala school was number three. Until the validation for Coeur d'Alene school is completed, however, the final funding decision cannot be made for the Coeur d'Alene school.

Question: How does the prioritization of the FY 1990 request relate to the priority system which was directed to be established two years ago?

Answer: A special New School Construction Evaluation Committee comprised of senior education and facilities operations staff reviewed all applications submitted. The Committee then made recommendations as to those applications qualifying for ranking and prioritization.

Question: In the FY 1988 Continuing Resolution, language was included directing the BIA to conduct a feasibility study on alternatives to building a facility. Among the alternatives the Bureau should address the possibility of adding a wing onto an existing school to serve the additional students. In response to a question for the record last year, you indicated that a cooperative agreement with the local school district was not practical. On what basis was a cooperative agreement impractical?

Answer: The basis for stating that a cooperative agreement would be impractical was directed from an educational viewpoint. Many Tribes believe that if their children are absorbed by the local public school district they would suffer an identity loss, they would not be provided native language instruction, and that they would not receive equal representation by the local school or school board. The Coeur d'Alene Tribe is in opposition to any such consolidation with the local public school district.

In the case of the Coeur d'Alene school, the nearby Plummer County School District Superintendent was contacted regarding the addition of classrooms. The Plummer Superintendent expressed that if tribal students were accepted, he would not make any compromises relative to curriculum or if they would hire the teachers or staff of the Coeur d'Alene Tribal School.

Question: Can you provide for the record an analysis of your discussions with local school district and include any correspondence?

Answer: A BIA need evaluation report will be provided separately.

Housing Assessments

Question: You have requested an additional $500,000 to develop location-by-location needs assessment of housing furnished to employees by the Interior Department. The justification stated that the Department must be sure the housing is needed before repairs are budgeted and paid for. There are 10,000 units of employee housing. What are you going to accomplish with $500,000 dollars?

Please explain, what is a "location-by-location needs assessment of housing." Don't you know where the problem is or are these funds for areas where there currently isn't housing?

Will this effort hold up the funding provided to the Park Service for housing in FY 1989? Since no additional FTE's are requested, what are your plans for these funds?

Answer: An additional $500,000 has been requested in FY 1990 to conduct a pilot program to assess repair needs for the BIA stock of housing, which constitutes 42 percent (4,507 units) of the Department's total employee housing.

This initiative provides the basis for development of a multi-year housing strategy to bring required housing up to good condition. This strategy includes three steps: first, to determine what employee housing is required and to dispose of the excess; second, to inventory the conditions and corrections needed to bring the required housing up to an acceptable condition; and third, to undertake a renovation program, under contract, based on the specifications developed in the second step.

As part of this process, the Department will be examining alternative ways to address housing requirements more effectively and to provide for more cost-effective management of its housing. As part of the effort to improve required employee housing, opportunities for alternative ownership/operation options will be examined, and compliance with current guidelines for government-furnished housing will be reviewed.

This program will not hold up funding for the National Park Service. No additional FTE's are requested, as some work can be done using in-house staff, with the remainder being contracted.

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Aleutian and Pribilof Islands

Question: Why weren't additional funds requested so that actual reparations could be made to individual Aleuts in FY 1990 given that many of them are elderly and a few more die every month?

Answer: The passage of the Civil Liberties Act of 1988 of which the Aleut Restitution is a part, took place late in the 100th Congress and the FY 1990 budget was well into its final stages. The authorizations of the Act were recognized and $300,000 of funding was requested.

Legal Fees in Alaska

Question: On an unrelated matter, in 1988 the BIA's contract with Alaska Legal Services to provide legal assistance to Native allotment applicants expired. About $200,000 in tribal law monies had to be reprogrammed to cover this cost. How much was included in the President's budget request to provide legal services to Native allotment applicants in Alaska?

Answer: In 1988 the BIA provided a total of $125,000 in attorney fees funds and $50,000 of Litigation Support funds to Alaska Legal Services to assist Alaska Native Allotment applicants. This was done under the budget authorities of those programs and no reprogramming was needed or utilized. In FY 1990, as in all years, a national funding level is requested in those categories (attorney fees $1,500,000 and litigation support $1,480,000). The funds are then used to meet the highest needs on a national level, which cannot be determined two years ahead of time as required by the budget cycle since the funds are related to litigation, which cannot be anticipated. While we are certain some funding level will be requested, justified, and granted (on a competitive basis) to assist Alaska Native Allotment applicants, the amount is unknown at this time.

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Question: Public Law 100-297 provides for a three-year phase-in to increase salaries for teachers and counselors in Bureau of Indian Affairs schools. The Bureau has requested $4,600,000 for the first phase. How did the Bureau calculate this amount? How can the Bureau verify that this amount is adequate to accomplish the one-third phase-in? What are the Bureau's plans to assure that contract schools receive an equitable share of the teacher and counselor pay increase?

Answer: The original request of $4.6 million which is included in the FY 1990 budget justification was based on data published in the draft Report on BIA Education: Excellence in Indian Education. The data on the number of teachers was understated, and the Bureau has already testified to a shortfall of $1.5 million. Recent field studies have provided more accurate data on the number of eligible teachers, and the DOD Overseas Schools recently received a 5.74% payraise. Both of these factors are included in the calculation shown below which demonstrates a funding shortfall of $3.4 million. At the requested funding level, the implementation of DOD salary rates would have to be delayed or phased in over a longer period than the three years directed in P.L. 100-297.

1,880	teachers, counselors, and home living specialists	x	$23,340	average salary	= $43,879,200
1,880	teachers, counselors, and home living specialists	x	$33,356	average salary for DOD school teachers and counselors	= $62,709,300
					$18,830,100

The $18.8 million additional cost represents only the cost of teachers, counselors, and home living specialists in Bureau-operated schools. Section 106 of P.L. 93-638 requires that "the amount of funds provided under...contracts... shall not be less than...would have otherwise (been) provided for... direct operation of the programs or portions thereof for the period covered by the contract..." To calculate the additional amount required under this provision of law to provide contract schools with the same funding for salary increases, comparative Weighted Student Units (WSU's) were used as the basis.

Bureau-operated WSU count = 47,127 (71% of WSU's)
Contract school WSU count = 19,480 (29% of WSU's)

Therefore, $18.8 million was considered to equal 71% of the total cost, and the total cost was calculated to be $26.5 million. In accordance with P.L. 100-297, 1/3 of this total cost, or $8.8 million, is the estimated cost of the pay raise in FY 1990.

FY 1990 Teacher Pay Raise	$8.8 million
Already requested	-4.6 million
Prorata share of 89 pay cost added to 90 Base	- .8 million
Shortfall	$3.4 million

Question: Public Law 100-297 provides a new formula for determining the administrative costs for school operations. The formula appears to have been devised to apply to those school systems which would operate as free-standing schools, apart from the operations of a tribal government. However, it appears that the formula may penalize those tribal governments which might elect to operate their schools under the auspices of a centralized tribal management system. Has the Bureau applied this formula to a centralized school system, one whose base for calculation includes all tribal grants and contracts, not just those specific to the operation of schools? If so, what have been the results?

Answer: The administrative cost formula to be implemented in FY 1990 only considers contracts and grants for educational (and related) programs as the base for calculation; therefore, we have not made any comparative runs. All contractors will be treated in the same manner in the formula computation.

Question: This question is directly related to the operation of the BIA administered schools on the Choctaw Reservation in Mississippi and to their lack of parity with the local public schools. The Mississippi State Legislature has enacted the Education Reform Act, a comprehensive approach to educational improvement and has also appropriated funds to substantially increase teacher salaries, provide reading assistants in all K-3 grades, fund state-required staff development activities, and provide summer remediation programs for students who fail to pass the state functional literacy examination.

According to the first preliminary review of the Choctaw schools by the state Commission on School Accreditation, released in April, 1988, the school system has 46 deficiencies. The schools' accreditation status has been lowered to "advised," and the test scores of Choctaw students are so far below the state minimum standard required for accreditation that it is likely that the school will be placed on probation next year.

These schools do not have adequate funds to recruit teachers and administrators on a competitive basis with public schools in the surrounding Mississippi counties, to provide reading assistants in all kindergarten and early elementary classrooms, and to develop a program of remediation to raise test scores to meet the state minimum performance standards. While these circumstances are specific to the Mississippi Choctaw schools, it is likely that many other Bureau schools are experiencing the same dilemma.

In view of this need, why has the Bureau not requested funds for FY 1990 to assist schools in achieving parity with local public schools? What are the Bureau's specific plans to assist the Mississippi Choctaws in meeting the state minimum standards?

Answer: The Bureau was mandated by Congress to provide salary increases for teachers and counselors equal to the Department of Defense's overseas schools salary scale by school year 1991-92. This is to be phased in over a three year period. The Bureau has requested additional funds in FY 1990 to meet the first third pay difference between BIA teachers and the DOD teachers. Contract schools will receive a proportionate share of the increase requested for the salary adjustment. Choctaw schools will receive their share of the increase for the teachers and counselor salaries. The Choctaw system will be able to compete with other schools in the State of Mississippi for good teachers and counselors. A Bureau review of schools in relation to the Indian School Equalization formula and the educational needs found that the 7th and 8th grades were utilizing more funds than they generated. This funding need became a part of P.L. 100-297, and the weighted student unit was increased to .2 for students in grades 7 and 8. This increase in funds will allow schools more flexibility to meet priority needs.

Chapter 1, a supplemental program funded by the Department of Education and operated by the Bureau of Indian Affairs, provides for teaching assistants or aides to perform remediation activities for students. Choctaw schools participate in this program.

Question: Indian tribes were strongly urged by the Administration to contract for the operation of local Bureau of Indian Affairs schools. The Mississippi Band of Choctaw Indians responded with the decision to contract for the operation of the six elementary and one boarding high school on the Choctaw Reservation, effective July 1, 1989. Once under contract, the Choctaw tribal school system will become the largest Indian contract school system with multiple school sites, all operated under the auspices of a tribal department of education.

In its preparation for an orderly transition of this large school system from federal to tribal control, the tribe found that financial assistance beyond its resources were needed if the major tasks of developing organization structures and correcting some of the most glaring institutional deficiencies were to be accomplished. The tribe began, in June 1988, to request funds for planning and transitional activities from the Bureau of Indian Affairs. Despite repeated requests from the tribe, no financial assistance at all has been provided. Within the next few months, the tribe will be employing staff and putting into place the management system for these schools. Does the Bureau intend to provide any financial assistance to the tribe in this costly undertaking? If no, why not? If yes, to what extent and when will the Bureau provide this help?

Answer: The Bureau will not provide financial assistance to the Choctaw Tribe for their preparation efforts to contract, but can provide technical support when the actual contract negotiations begin.

Question: Public Law 100-297 provides for the establishment of tribal departments of education for the purposes of planning and coordinating all educational programs of a tribe. The availability of funds to support tribal departments of education would greatly assist those tribal governments which are developing comprehensive administrative systems for reservation schools and for all other education programs. Why has the Bureau not requested funds for this function?

Answer: P.L. 100-297 addressed Tribal Departments of Education in Section 5119 and made such entities subject to the availability of appropriations. The Bureau considers basic elementary and secondary education to be the highest funding priority for education and has not requested funding for Tribal Departments of Education. Tribal governments may want to explore the use of contract support funds to establish a base for funding such departments.

Question: The Bureau is requesting a net decrease of over $4 million in contract support funds, but states in the Justification that "the requested funding level is an increase of $1.2 million over the actual Contract Support Funds distributed to tribes in FY 1988." If both of these statements are correct, where did the $5.3 million go that was not distributed to tribes?

Answer: The FY 1989 appropriation increased contract support by $5.9 million compared to the FY 1988 level. In FY 1989 all funds appropriated for contract support will be used for that purpose.

Question: In addition, the Bureau has added $9.8 million for contract support for construction programs, citing the requirement in the Self-Determination Amendments that indirect costs be paid on construction projects. But the amendments provide the indirect costs be paid on construction administration and management only. Since the majority of BIA construction projects are not tribally contracted, why did the Bureau see fit to add ten per cent of the construction budget in contract support costs?

Answer: In addition to the amounts contained in the FY 1990 budget for construction, unobligated carried over balances could be available for contracting as would approximately $78 million of Highway Trust Fund Monies for road construction. When all available funds are considered, the amount requested for contract support is approximately three percent.

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Question: Oklahoma has the second largest Indian population in the country, yet BIA figures indicate that in the Johnson O'Malley Indian education program Oklahoma is 22nd of 31 states receiving funds in the amount received per student. Per student averages range from a high of $8,183 in Alaska to $3,078 in Oklahoma to a low of $2,169 in Mississippi. Why is there such a discrepancy?

Answer: The figures cited are actual state expenditures for public schools and reflect the results of county and state governmental decisions.

Question: It also seems to me that per student expenditures are extremely high. For example, we spend $8,183 per student in Alaska for the elementary and secondary education of Native students in a public school system. Considering the fact that for $8,000 per year a student could get a very good college education at a private school, why are we spending so much, and what exactly do JOM funds pay for that necessitates such huge expenditures in an educational system that is already supported by public funding?

Answer: The figures cited in the question reflect actual state expenditures, not JOM expenditures. In FY 1990, Alaska will receive approximately $167 per student in JOM funds and Oklahoma will receive approximately $90 per student.

Question: In the Business Development Program Grants, it seems Oklahoma does not receive a fair portion of funds when compared to other BIA areas. In fact, other states with large Indian populations receive two to three times more than Oklahoma does. Why is Oklahoma short-changed in this program? Is it because all but one of our tribes is non-reservation based?

Answer: In FY 1988, the Bureau received $7 million in Indian Business Development Program Grant funds to service tribes in 25 states. The Muskogee and Anadarko Area Offices in Oklahoma received $998,100 in the initial allocation. Anadarko returned about $230,000 in unused monies which was redistributed to other area offices. The remaining $70,000 of their original allocation was never used and was returned to Treasury.

Question: As a result of the hearings being conducted by the Special Investigating Committee of the Senate Select Committee on Indian Affairs, many concerns have arisen relating to the operation of Indian bingo games. In light of the concerns expressed, when is the newly created Indian Gaming Commission expected to be created and in full operation? What will be the scope of the commission's responsibilities?

Answer: It is expected that the National Indian Gaming Commission will be in operation sometime in early 1990. Funding for the Commission is to begin in Fiscal Year 1990. The Commission must promulgate regulations before it can begin to carry out P.L. 100-497. Until that is complete, the Bureau of Indian Affairs will continue to regulate Indian gaming under interim authority as spelled out in section 10 of the Act. Once the Commission is fully operational it will act as the sole regulatory agency for Indian gaming.

The scope of the Commission's responsibilities will include the regulation of Class II games (high stakes bingo and bingo-like games). Within this area, the Commission will have review, subpoena and deposition authority, and have the power to levy fines of up to $25,000 (see 14(a)(1)). A summary of the act prepared by the Departmental Solicitor's Office is attached.

Question: In your opinion, is the legislation which created the new gaming commission, P.L. 100-497, strong enough to help prevent organized crime from being involved in Indian bingo? Do you feel that additional oversight by the federal government is required in Indian gaming operations and if so, in what areas?

Answer: The present legislation, coupled with continued monitoring by the Federal Bureau of Investigation, should be strong enough to help prevent organized crime from being involved in Indian bingo.

Question: The Cherokee, Choctaw and Chickawaw tribes of Oklahoma are interested in enforcing their ownership of the Arkansas Riverbed and desire the Bureau of Indian Affairs along with the Bureau of Land Management to conduct the necessary surveys. Since the Department has a fiduciary duty to protect tribal lands from intruders and manage tribal surface and subsurface resources in a productive manner, how can this obligation be met without immediately performing cadastral surveys on the disputed riverbed tracts where there are known intruders living and farming the lands?

Answer: The Bureau of Indian Affairs' Muskogee Area Office has been working closely with the three tribes over the past two years to document the extent and nature of each instance of purported trespass. the data has been collected and is presently being analyzed by the three tribes to develop priorities for the surveying to be cone by the BLM. The Bureau requested that the priority listing be developed because of the relatively high per mile cost of riparian (i.e., river-related) surveys and the limited resources available to the Bureau in meeting demands for survey services, both along the Arkansas River and nationwide. While the overall survey plan calls for a general southeasterly to northwesterly progression along the River, the Tribes are of the opinion that an expedited delivery of survey plats where trespass is at issue would enable them to litigate the highest priority cases. As a result, other purported tresspassers would be more amenable to a negotiated, rather than a litigated, settlement. The remaining, lower-order priority surveys could then be accomplished in line with the general up-river planned progression of the surveys; in this manner, administrative cost efficiencies can be maximized, thus making most efficient use of Bureau cadastral survey resources.

Question: Of the estimated $700,000 of FY 1989 funds and $50,000 of FY 1990 funds requested by the Administration, what portion would be dedicated to the proposed new BLM "project office" to be established in Oklahoma to survey the Arkansas riverbed for the Cherokee, Choctaw and Chickasaw tribes?

Answer: FY 1989 funding for the survey of the Arkansas riverbed is $50,000; this represents the total cadastral survey allocation of the Muskogee Area Office. Anticipated FY 1990 funding for the Muskogee Area Office is $100,000 - $125,000 which will be dedicated to the survey of the Arkansas riverbed. The total request for funding for cadastral surveys in FY 1990 is $1,537,000.

Question: Of that portion of funds to be allocated to the new BLM project office in Oklahoma, how much of those funds would have to be used for administration and other expenses to operate the project office and how much would be available to pay surveying costs?

Answer: The BLM assesses an "indirect cost" charge for all reimbursable cadastral surveys undertaken for other Federal agencies whether they are accomplished via a project office or by other means. The overhead charge pays the cost of administrative operations (payroll, procurement, etc.) in support of the survey work. The rate for FY 1989 is 18%.

Question: How much money in FY 1990 would be required to complete in a three year period the necessary cadastral surveys of tribal lands in the entire 96-mile riverbed and initiate any related court actions?

Answer: The BLM estimate of $750,000 to survey the entire length of the riverbed owned by the three tribes is both very tentative and was provided without on-site investigations or records research. The BLM estimates that the survey would require more than three years to complete because of technical (river movement) and administrative (FTE, contracting, etc.) complexities. The cost of anticipated litigation connected with the surveys cannot be estimated, as we have not received the tribes' priority list for surveys where trespass is involved.

QUESTIONS SUBMITTED BY SENATOR PETE DOMENICI

Taos-Blue Lake Wilderness Protection

Mr. Ragsdale, the FY 1989 Interior and Related Agencies appropriations bill included $250,000 for the Taos-Blue Lake Wilderness Protection program. The funds provided for this fiscal year renew a long-overdue effort to protect this beautiful area, and I am very much dismayed that no funding has been included in the FY 1990 budget request to continue this effort.

There is a long history surrounding the Blue Lake area of New Mexico. In 1906, the federal government took some 48,000 acres of wilderness from the Taos Pueblo. These lands were considered sacred by the Taos Indians, and they endured a 60 year legal battle to regain exclusive use of the Blue Lake Wilderness. That battle ended in 1970 when the Congress enacted Public Law 91-550, which returned the Blue Lake Wilderness to the Taos Pueblo and gave responsibility for preserving and maintaining the area to the Secretary of Interior.

In 1971 and 1972, BIA spent $237,000 to fence 12 of the 26 miles of the wilderness boundary. Until the House and Senate Appropriations agreed to provide $250,000 to renew the Taos-Blue Lake Wilderness Protection program in FY 1989, the federal government had abrogated its trust responsibility for this area for 17 years.

Question: Am I correct that the BIA assisted the Taos Pueblo in developing the Blue Lake Wilderness Protection plan and committed to the Tribe that it would help seek funding to meet the Department's trust responsibilities established in Public Law 91-550?

Answer: Northern Pueblos Agency and Albuquerque Area Office personnel did assist the tribe in developing the Blue Lake Wilderness Protection Plan, and informed the tribe that they would attempt to locate funding to implement the plan.

Question: Could you outline for the record what activities BIA is undertaking to protect the Blue Lake Wilderness area with the $250,000 appropriated for FY 1989?

Answer: The Taos Tribe has informed the Bureau that it wishes to contract for the $250,000 in FY 1989 so that the tribe can develop its own staff and program for managing the Blue Lake Wilderness Area. Bureau personnel are in the process of finalizing this contract.

Question: Did BIA include any additional funding for this program in its original FY 1990 budget request to OMB?

Answer: The FY 1990 budget estimate was submitted to OMB before the FY 1989 Appropriation had been enacted. No funding for this project was included.

Question: What are BIA's current estimates for start-up costs for this program in the first year and on an annual basis. What could be accomplished toward the protection of this pristine wilderness area with an annual appropriation of this amount?

Answer: Cost estimates are $250,000 in the first year and $110,650 annually in subsequent years. With this funding, fence construction around the wilderness area would be completed and maintained. The entire area would be posted against trespassing. A four-man patrol crew would regulate and monitor public access in the area, and a four-man trail crew would develop and maintain trails and keep the area clean. An information and education program would also be developed to educate the community about wilderness values.

Fish Hatchery Operations

Mr. Ragsdale, this Senator raises with some frustration the issue of who should oversee the operation of Indian fish hatcheries. You may be aware that, at the request of a number of Senators, this Subcommittee has directed that the operations of certain hatcheries be overseen by the U.S. Fish and Wildlife Service rather than the BIA because of the specific expertise of the Service in fisheries and fisheries management. In spite of explicit language in the Senate report that the Service should fund "both the BIA hatcheries and fishery assistance offices until changed by the Committee," the Reagan administration again proposed that these operations continue under the BIA.

Question: For the record, can you tell this Subcommittee how the transfer of the operation of the Indian fish hatcheries and fishery assistance in New Mexico, Arizona, and Wyoming from BIA to the Fish and Wildlife Service worked out this past year, and the year before?

Answer: Facility operations were not transferred in FY 1989 and FY 1990, only the budget through which supporting funds are provided. During the past two years, funds maintained in the FWS budget have been unavailable to tribes for the development of tribal resource management staffs and programs. Under the Self-Determination amendments of 1988, however, tribes will now be afforded the opportunity to contract funds provided to all Interior bureaus for the delivery of services to Indians.

Question: I'm sure I speak for my colleagues on this Subcommittee when I tell you that we support self-determination for the Indian people. But it seems to this Senator, at least, that the proper way to achieve that goal in fisheries is for the Fish and Wildlife Service to directly operate these hatcheries, and more importantly, to provide training for Indian tribes in the management of their fisheries resources. Do you have any thoughts on the best way to provide training to promote the realization of self-determination in fisheries management?

Answer: To the extent that tribes cannot directly provide for their own fish and wildlife resource management needs, the Bureau agrees that the FWS is the most appropriate agency to provide technical assistance. Responsibilities for managing and developing Indian fish and wildlife resources, however, are most appropriately carried out by the tribes themselves, through the development of trained professional tribal staffs who are accountable, not to federal agency personnel, but to the tribal governing bodies. The success of the Wildlife and Parks budget in promoting full tribal capability in the management of fish, wildlife and outdoor recreation resources is evidenced by the fisheries programs of the Northwest and Great Lakes tribes and the big game management programs of the Southwest tribes. The Shoshone and Arapahoe tribes may wish to contract the $171,000 in federal assistance funds currently earmarked for the Lander, Wyoming office to begin implementing their new tribal game code in FY 1990. The Navajo, Zuni, Jicarilla, San Ildefonso, San Juan, Santa Clara, Picuris and Nambe tribes and pueblos have already entered into P.L. 93-638 contracts with the Bureau to begin developing their own fisheries programs, and are exploring options for expanding tribal operations, including new fish rearing and stocking programs to better meet their needs. The Navajo Tribe recently completed construction of a tribal fish hatchery, and the Zuni and Santa Clara pueblos are actively exploring fish rearing feasibility options on their reservations. Some of these tribes are currently using their own resources to purchase fish more suitable for stocking into their lakes than have been available from the federal fish hatcheries.

The Bureau strongly supports fish and wildlife training programs for tribal members, and has spent much time and effort during the last year developing a specialized course to train tribal conservation enforcement officers at the Bureau's Marana, Arizona Law Enforcement Academy. More importantly, however, tribal members should be encouraged to pursue degrees in fish and wildlife management at recognized universities, so that tribes which hire them can deal one-on-one with state and federal resource managers.

In the absence of adequate tribal capacity for fisheries training, the best way to provide fisheries training is: (1) on-the-job training at the Fish and Wildlife Service (Service) or State facilities; (2) course work at the Service's fishery academy; (3) course work at the Service's Cooperative Research Units; or (4) course work at other institutions.

INDIAN GAMING REGULATORY ACT

On October 17, 1988, the President signed into law the Indian Gaming Regulatory Act, Public Law 100-497, 25 U.S.C. § 2701 et seq. The Act provides a system for the regulation of gaming on Indian lands by dividing gaming into three classes, establishing the National Indian Gaming Commission to regulate Class II gaming, and authorizing compacts between tribes and states for the regulation of Class III gaming. The following is a summary of the major provisions of the Act which may be of interest to the tribes and the states.

Class I Gaming

Class I gaming includes social or traditional gaming which is played in connection with tribal ceremonies or celebrations. Class I gaming is regulated exclusively by the tribes. Section 4(6).

Class II Gaming

Class II gaming includes bingo and, if played at the same location as bingo, pull tabs, lotto, punch boards, tip jars, and instant bingo. Section 4(7)(A)(i). Class II gaming also includes card games which are authorized by state law or not explicitly prohibited by state law and played at any location in the state. The card games must be played in conformity with state law or regulations regarding hours of operation and pot limits. Section 4(7)(A)(ii).

Class II gaming also includes those card games actually operated by an Indian tribe on or before May 1, 1988, in Michigan, North Dakota, South Dakota, and Washington except that new or different games cannot be substituted for the games that are grandfathered, and the games must be played at the current pot and wager limits. Section 4(7)(C).

Class II gaming also includes, for a one year grace period, slot machines, and electromechanical or electronic facsimiles of any game of chance that were legally operated on Indian lands on or before May 1, 1988, if no later than November 16, 1988, the tribe requested the state to negotiate a tribal-state compact covering those machines. Section 4(7)(D). Note: If a compact for gambling devices is successfully negotiated and the compact is approved by the Secretary of the Interior, 15 U.S.C. § 1175, the Gambling Devices Act, does not apply to such machines. Section 11(d)(6).

A tribe may engage in Class II gaming if the state in which the tribe is located permits such gaming for any purpose by any person, organization or entity. Class II gaming is regulated by the National Indian Gaming Commission and the tribe or solely by the tribe if issued a certificate of self-regulation.

Class III Gaming

Class III gaming includes all gaming not included in Class I or Class II , such as casino-type games, gambling devices (after the grace period or if a tribe failed to request the state to negotiate a compact by November 16, 1988), pari-mutuel betting, etc. Section 4(8).

Class III also includes banking card games, baccarat, chemin de fer, or blackjack. Section 4(7)(C). Note: These games fall within Class II if played on May 1, 1988, in Michigan, North Dakota, South Dakota, or Washington.

Class III gaming is prohibited unless authorized by a tribal-state compact.

Class III Gaming and Tribal-State Compacts

Class III gaming is lawful when it is authorized by a tribal ordinance approved by the chairman of the Commission, is located in a state that permits such gaming (whether for charitable, commercial, or governmental purposes), and is conducted in conformance with a tribal-state compact which has been approved by the Secretary of the Interior. Section 11(d)(1).

The Act authorizes an Indian tribe and the state in which the tribe is located to enter a compact governing gaming activities. The compact may include provisions concerning: the application of tribal or state criminal and civil laws directly related to gaming, the allocation of jurisdiction between the state and the tribe, state assessments to defray the costs of regulating the activity, taxation by the tribe in amounts comparable to state taxation, remedies for breach of contract, standards for the operation and maintenance of the gaming facility, and any other subjects related to the gaming activity. Section 11(d)(3)(C).

The state is not authorized to impose a tax or assessment (except assessments that are agreed to) upon a tribe or person authorized by a tribe to conduct a gaming activity. The state cannot refuse to negotiate a compact based on its inability to impose a tax, fee, or other assessment. Section 11(d)(4).

The federal districts courts are vested with jurisdiction over: actions by Indian tribes arising from the failure of a state to negotiate with a tribe seeking to enter a compact or to negotiate in good faith, any action by a state or tribe to enjoin a Class III activity which violates the tribal-state compact, and any action by the Secretary to enforce the procedures prescribed in subsection 11(d)(7)(vii). Section 11(d)(7).

A tribe may initiate an action against a state only after the passage of 180 days from the date the tribe requested the state to enter negotiations for a compact. The tribe must submit evidence that a compact has not been negotiated and that the state did not respond to the request or did not respond in good faith. The state then has the burden of proving that it acted in good faith. In determining whether the state has negotiated in good faith, the court may take into account the public interest, public safety, criminality, financial integrity, and adverse economic impacts on existing gaming activities. Any demand by the state for taxation of the tribe or Indian lands is to be considered by the court as evidence of bad faith on the part of the state. If the court finds that the tribe has failed to negotiate in good faith, it shall order the state and the tribe to conclude a compact within 60 days. Section 11(d)(7)(B)(i)-(iii).

If the state and the tribe fail to conclude a compact within the 60-day period, the parties are to submit to a court-appointed mediator their last best offers for a compact. The mediator then selects the compact which best comports with Act and other applicable laws. If the state consents to the compact selected by the mediator within 60 days, it constitutes the tribal-state compact. If the state does not consent to the compact within the 60-day period, the mediator notifies the Secretary of the Interior who, after consulting with the tribe, prescribes procedures consistent with the compact selected by the mediator under which Class III gaming may be conducted. Section 11(d)(7)(B)(iv)-(vii).

The Secretary of the Interior is authorized to approve tribal-state compacts. The Secretary may disapprove a compact if it violates: the Act, any other federal law that does not relate to jurisdiction over Indian gaming, or the trust obligations of the United States to Indians. The compact takes effect once the Secretary publishes a notice in the Federal Register that the compact has been approved.

Gaming on Indian Lands after Enactment

Gaming is prohibited on land acquired by the Secretary in trust for an Indian tribe after the date of enactment of the Act unless: (1) the land is within or contiguous to the tribe's existing reservation boundaries; or (2) if an Oklahoma tribe, the lands are within the tribe's former reservation or the lands are contiguous to other land held in trust or restricted status for that tribe. This prohibition does not apply if the Secretary determines that a gaming facility would be in the best interests of the tribe and its members and would not be detrimental to the local community and the governor of the state concurs with the Secretary's determination. This prohibition also does not apply to lands: taken in trust as part of a settlement of a land claim, comprising the initial reservation of a tribe federally acknowledged, or restored to a tribe that has been restored to federal recognition. Section 20.

National Indian Gaming Commission

Composition

The Commission, established within the Interior Department, is composed of three full-time members with the Chairman appointed by the President and the other two members appointed by the Secretary of the Interior. Section 5(a) & (b). Two of the three Commissioners must be members of federally recognized Indian tribes and no more than two members can be of the same political party.

Powers of Chairman

The Chairman is empowered to: (1) issue temporary closure orders; (2) levy civil fines; (3) approve tribal gaming ordinances; and (4) approve management contracts. The Chairman is vested with such other powers as the Commission may delegate. Section 6.

Powers of the Commission

The Commission is vested with the following powers which cannot be delegated: (1) approve the annual budget; (2) adopt regulations for civil fines; (3) adopt an annual schedule of fees; (4) authorize Chairman to issue subpoenas; and (5) permanently close a gaming activity. Section 7(a).

The Commission is vested with the following additional powers: (1) monitor gaming activities; (2) inspect gaming premises; (3)

conduct background investigations; (4) inspect records related to gaming; (5) use U.S. mails; (6) procure supplies; (7) enter into contracts; (8) hold hearings; (9) administer oaths; and (10) promulgate regulations. Section 7(b).

Interim Authority to Regulate Gaming

The Secretary of the Interior is to continue to exercise his existing authority to regulate gaming until such time as the Commission is organized and prescribes regulations. The Secretary is to provide staff and support assistance during the transition period. Section 10.

Tribal Self-Regulation

A tribe may petition the Commission for a certificate of self-regulation if it has been engaged in a Class II activity continuously for a three-year period with at least one of the years being after the date of enactment of the Act and has otherwise complied with Section 11. The Commission issues the certificate if it is satisfied that the tribe has:

(1) conducted the gaming activity in a manner that has resulted in an honest accounting of all revenues, a reputation for a safe and honest operation, and is generally free of evidence of criminal or dishonest activity;

(2) adopted and is implementing an adequate system for: accounting of revenues, investigation, licensing, and monitoring of employees, and investigation, enforcement, and prosecution for violations of its gaming laws; and

(3) conducted the gaming activity on a fiscally sound basis. Section 11(c)(3) & (4).

Management Contracts

The Chairman may approve a management contract if it provides: (1) adequate accounting procedures; (2) access by tribal officials to the gaming operations in order to verify the daily gross revenues and income; (3) a minimum guaranteed payment to the tribe that has preference over the retirement of development and construction costs; (4) a ceiling for the repayment of such costs; (5) a maximum term of 5 years or, at tribal request, 7 years; and (6) grounds and procedures for terminating the contract. Section 12(b).

The management fee cannot exceed 30 percent of the net revenues unless the tribe requests a higher percentage. The Chairman may approve a higher percentage, not to exceed 40 percent, if a higher percentage is justified based on the capital investment and projected income. Section 12(c).

All existing ordinances and management contracts, whether or not approved by the Secretary, must be submitted to the Chairman and must comply with the requirements of Section 12. Section 13.

Commission Funding

The Commission is authorized to assess each game a fee which is based on a sliding fee scale from one-half of one percent to two and one-half percent on the first $1,500,000 of gross revenues and up to five percent of amounts over $1,500,000. The total amount of fees which the Commission can assess in any fiscal year is limited to $1,500,000. The Commission is authorized to request appropriations in an amount equal to the annual assessment. Section 8. Thus, the Commission's annual budget cannot exceed $3,000,000 ($1,500,000 from assessments and $1,500,000 from appropriations). There is authorized to be appropriated an amount not to exceed $2,000,000 for the first fiscal year. Section 19.

SUBCOMMITTEE RECESS

Senator **Reid**. The subcommittee stands in recess until 10 a.m., Monday, March 13 when we will hear testimony from the Energy Information Administration, the Economic Regulatory Administration, the Office of Hearings and Appeals, and the Office of Emergency Preparedness.

Thank you all very much.

The subcommittee stands in recess.

[Whereupon, at 10:55 a.m., Friday, March 10, the subcommittee was recessed, to reconvene at 10 a.m., Monday, March 13.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

MONDAY, MARCH 13, 1989

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room S-128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd and Domenici.

DEPARTMENT OF ENERGY

ENERGY INFORMATION ADMINISTRATION

STATEMENT OF DR. HELMUT A. MERKLEIN, ADMINISTRATOR

ACCOMPANIED BY LAWRENCE A. PETTIS, DEPUTY ADMINISTRATOR

PREPARED STATEMENT

Chairman BYRD. The subcommittee will come to order. This is the time scheduled for the Department of the Interior and Related Agencies Subcommittee to hear testimony on the fiscal 1990 budget request for the Energy Information Administration, the Economic Regulatory Administration, the Office of Hearings and Appeals, and the Emergency Preparedness Program, all from the Department of Energy.

We will hear first from Dr. Helmut A. Merklein, Administrator of the Energy Information Administration. The fiscal year 1990 budget request for the Energy Information Administration is $65.2 million, an increase of $2.4 million, over 3.8 percent over the fiscal year 1989 level.

Your prepared statement, Dr. Merklein, will be placed in the record.

[The statement follows:]

STATEMENT OF HELMUT A. MERKLEIN

Mr. Chairman, I am pleased to appear before the Committee today to present the Fiscal Year 1990 budget request of the Energy Information Administration, or EIA. This request is for $65.2 million and 468 full-time equivalent staff years (FTE's). I consider this amount to be sufficient to continue EIA's mission in FY 1990.

MISSION OF THE ENERGY INFORMATION ADMINISTRATION

The EIA is the Nation's primary source of comprehensive energy information. EIA provides relevant and timely energy data and analysis reports to the executive branch, Congress, State governments, and the public so that those who make decisions about energy do so with adequate information at their disposal. EIA also provides energy data, analysis, and processing support to the Federal Energy Regulatory Commission (FERC) and to other Department of Energy (DOE) offices to assist them in carrying out their responsibilities.

The EIA collects, evaluates, assembles, analyzes, and disseminates data and information that are pertinent to energy resources and reserves; energy production, consumption, distribution and technology; related economic and statistical information; and data and information that bear upon the adequacy of energy resources to meet this Nation's demands in the near and longer term future. This is in accordance with EIA's legislative mandate.

While administratively an integral part of the Department of Energy, EIA is vested with a considerable measure of autonomy in determining both the information to be gathered and the content of EIA reports. In creating EIA, the Congress meant to establish an unbiased source of energy information and analysis. Subjects of interest to Congress which we have recently addressed include current and projected petroleum market trends, use of energy in the manufacturing sector, and the response of natural gas drilling and production under the Natural Gas Policy Act (NGPA).

USES OF ENERGY INFORMATION ADMINISTRATION PRODUCTS

Over the past several years, EIA has continued to develop and improve the statistical quality of its products so that it has become an integral component of the Federal statistics program. Many varied uses of EIA products serve to illustrate this point.

The Bureau of Economic Analysis uses EIA's petroleum data for the Gross National Product, and other accounts. The Bureau of Labor Statistics (BLS) uses our energy price data to verify the Producer Price Index and to calculate foreign crude oil price indices. Residential energy consumption data are used by the BLS to make adjustments to the Consumer Price Index and by the Senate Special Committee on Aging in their annual report. EIA data on coal, electric power, and petroleum are routinely used by the Environmental Protection Agency (EPA) for developing both area emissions estimates and new source performance standards. EPA also uses our petroleum data for analysis of motor gasoline lead phasedown activities. EIA coal production data are used, and often republished, by the National Coal Association, Business Week, Energy User News, Industry Week, the Federal Reserve Board, and the Department of Labor. The Nuclear Energy Agency of the Organization for Economic Cooperation and Development relies on EIA for historical data and projections of nuclear electricity generation, associated nuclear fuel cycle requirements, and estimates of uranium resources. EIA data and analyses are used by the Secretary of Energy in the annual determination of the viability of the domestic uranium mining and milling industry. The Office of Civilian Radioactive Waste Management uses EIA data and projections of nuclear electricity generation, nuclear waste fees, and nuclear spent fuel discharges in planning and conducting the Nation's waste storage program. Our data on the various energy sources are published by the Census Bureau in their Statistical Abstract of the United States. The International Energy Agency uses EIA's information and analyses on energy sources as the official statistics to describe the U.S. energy situation in international forums and publications. EIA's Nonresidential Buildings Energy Consumption Survey

(NBECS) data are used by the American Society of Heating, Refrigeration, and Air Conditioning Engineers to assist in development of their building code standards. NBECS also serves as a data collection vehicle for the Census Bureau, gathering information on expenditures for building alterations and repairs.

FISCAL YEAR 1989 ACTIVITIES

During FY 1989, EIA is continuing to produce and provide a stable core of publications and analysis reports. These include major multifuel publications, such as the Monthly Energy Review, the Annual Energy Review, the International Energy Annual, the Annual Energy Outlook, the International Energy Outlook, and the Short-Term Energy Outlook. Also included are the major fuel-specific publications, such as the Electric Power Monthly, the Natural Gas Monthly, the Petroleum Supply Monthly, and the Petroleum Marketing Monthly. EIA also will produce the annual oil and gas reserves report, the Weekly Petroleum Status Report, and other weekly, monthly, quarterly, and annual reports. In addition, the Nonresidential Buildings Energy Consumption Survey will be conducted during FY 1989. EIA will continue to provide basic energy information support to the Federal Energy Regulatory Commission on a reimbursable basis to assist in meeting the needs of its regulatory functions. EIA also will provide reimbursable support to other Government offices, such as the Office of Civilian Radioactive Waste Management, the Strategic Petroleum Reserve Office, and the Family Support Administration. Finally, EIA will continue to manage the DOE energy information forms clearance program and prepare the annual DOE Energy Information Collection Budget.

FISCAL YEAR 1990 OBJECTIVES

EIA plans to remain a timely, unbiased, and relevant source of energy information in FY 1990. The increases proposed in FY 1990 are primarily to cover increased funding for analysis of electric power issues, short-term forecasting improvements, data processing improvements, and increased ADP facilities management costs. The FY 1990 request represents an increase of $2.4 million over the amount appropriated in FY 1989.

Before taking up program changes in detail, I would like to briefly discuss two proposed changes in the appropriations language that are very important to EIA. The changes are designed to provide a measure of flexibility which will allow for a more efficient implementation of EIA programs requiring contract support. First is a proposal to allow no-year funding for the triennial energy consumption surveys. The work on a single survey spans about 4 years which does not conform to the contract requirements of annual appropriations. Second is a proposal to permit contracts funded with one year appropriations to continue for a full twelve months from the date of award, whenever that may occur within the fiscal year. With this new provision, vital services, such as survey operations, can continue on an uninterrupted basis at the commencement of the succeeding fiscal year.

NATIONAL ENERGY INFORMATION SYSTEM

The National Energy Information System (NEIS) contains the operational elements of EIA. They are: the Oil and Gas program; the Coal, Nuclear, Electric, and Alternate Fuels program; the Energy Markets and End Use program; ADP Services; Information Services; and the Office of Statistical Standards. The request for NEIS is $55.3 million and 437 FTE's, which includes 18 FTE's reimbursed by the Federal Energy Regulatory Commission and 2 FTE's funded by the Office of Civilian Radioactive Waste Management.

While the overall budget for NEIS remains virtually unchanged, there are some minor shifts in proposed expenditures within NEIS. Program decreases in the FY 1990 NEIS request total $370,000 due, in large part, to funding variations in the triennial end use consumption surveys. NEIS increases, which total about $950,000, primarily involve data development, collection, and processing improvements, and increased base-line ADP facilities management costs. Staffing in support of the Office of Civilian Radioactive Waste Management is one FTE less than in FY 1989.

The FY 1990 budget request for the Oil and Gas information program is $13.7 million, basically the same as in FY 1989.

The FY 1990 budget request for the Coal, Nuclear, Electric, and Alternate Fuels program is $5.4 million. This reflects an increase of $275,000. This planned increase would fund continued development of electric power information in such areas as interutility trade and nonutility power producers.

The Energy Markets and End Use program has a proposed FY 1990 funding level of $5.4 million. This represents an overall decrease of approximately $70,000. There are both increases and decreases within this program. EIA is requesting $150,000 to develop a PC-based short-term energy forecasting model, which would enhance the production of the Short-Term Energy Outlook, and $150,000 to automate statistical responses to international energy questionnaires. In the energy end use area, there is a decrease of $270,000 because the Residential Energy Consumption Survey is less complex and, therefore, less costly to implement and analyze than the Nonresidential Buildings Energy Consumption Survey being conducted in FY 1989. A further decrease of $100,000 to the Energy Markets and Ends Use program is due to the completion of an energy supply and consumption analysis covering the centrally planned economies.

The FY 1990 budget request for ADP Services is for $7.1 million. This includes an increase of $250,000 to cover facilities management costs associated with a new contract to operate and maintain EIA's computer facility.

In FY 1990, the Information Services program which contains the National Energy Information Center, our public information window to the world, includes an increase of $50,000 to research available technology for a new-generation automated publishing system. The FY 1990 budget request for the Information Services program is $700,000.

The Office of Statistical Standards is responsible for assuring the overall statistical quality of EIA's information products. In FY 1990, this program contains an increase of $50,000 to study the feasibility of developing standardized software to process EIA's surveys. The FY 1990 budget request for the Statistical Standards program is $1.2 million.

POLICY AND MANAGEMENT

The Policy and Management program provides for overall EIA direction by the Administrator and his support staff, including such activities as planning, budgeting, contract management, and other administrative functions and services. The FY 1990 proposal of $9.9 million and 31 FTE's includes a decrease attributable to planned, continued efforts to lower administrative overhead costs in order to free up funds for core program efforts.

In summary, I believe that EIA's FY 1990 budget request is reasonably sized to accomplish EIA's basic objectives.

I will be glad to answer any questions the Committee may have.

BIOGRAPHY OF LAWRENCE A. PETTIS

Lawrence A. Pettis is the Deputy Administrator, Energy Information Administration within the U.S. Department of Energy. In this position, he is responsible for the day-to-day management of the organization serving as the U.S. Government's primary source of comprehensive national energy statistics and objective energy analysis.

Prior to joining the Energy Information Administration in 1985, Mr. Pettis served as the Associate Deputy Assistant Secretary for the Strategic Petroleum Reserve (SPR) in the

Department's Office of Fossil Energy. In his nine years with the SPR program, he held various management positions with responsibility for program planning, design/construction management, crude oil acquisition and transportation, and emergency preparedness activities.

From 1969 to 1976, Mr. Pettis was employed by the U.S. Department of the Navy in project management/engineering positions associated with the nuclear submarine program.

Mr. Pettis was born on May 21, 1946, in Oklahoma City, Oklahoma. He received his B.S. degree in mechanical engineering from Oklahoma State University in 1969. He has also completed graduate courses in engineering administration at George Washington University.

INTRODUCTION OF ASSOCIATES

Chairman **Byrd**. Now, if you would like to introduce your associates and summarize your statement, we can then move on into the questions.

Dr. **Merklein**. I have with me the Deputy Administrator of EIA, Larry Pettis.

FISCAL YEAR 1990 BUDGET REQUEST

We are cognizant of the impact of the high deficits on the economy of this Nation. We insist that our resource levels are no more than what is absolutely necessary to accomplish our program objectives.

It is in this sense that we have offered the number of $65.2 million for our budget for fiscal year 1990. That is in real terms roughly the same as it was last year.

PART RECOMMENDATIONS

Chairman **Byrd**. The professional audit review team [PART] has completed its evaluation for the period October 1985 through June 1987. The principal objective of the review was to evaluate the adequacy of programs required to assure the Administrator of the quality of EIA's data collection analysis system.

The report focuses on the effectiveness of EIA's quality control activity, including standards, methods, and control procedures.

On page 16 of its report, PART states:

> This report and each of the six previous PART reports concluded overall that EIA did not and still does not have an adequate basis for evaluating the quality of its data and analysis products. Since 1982 significant reductions have occurred in the budget for quality assurance contracts.
>
> PART acknowledges that some improvements have been made over the years, but after a decade, PART concludes that greater efforts are both imperative and possible.

Chairman **Byrd**. How much are you requesting in fiscal year 1990 for the quality contract budget?

Dr. **Merklein**. Mr. Chairman, I think with your permission I would like to turn that question over to the Deputy Administrator who is more versed in the details of our quality efforts and of PART.

Chairman **Byrd**. All right.

Mr. PETTIS. Mr. Chairman, this is one of the issues that we have discussed in our comments on the PART report. Quality is an inherent part of our operations at EIA. It is a difficult number to just put your finger on, since we are continuously in the process of collecting data and that involves quality efforts such as editing. So each of the individuals that works not only in our organization but with our contractors is involved in quality.

We do have a separate category of funding that we call quality maintenance investments, which are specific areas that we can identify that need added attention. We have been funding that at a level of about $1 million a year.

Chairman BYRD. That is what you are requesting this year.

Mr. PETTIS. Yes; that is correct.

Chairman BYRD. Dr. Merklein testified in fiscal year 1985 before the House Interior Appropriations Subcommittee that an annual level of $2.5 million was about the ideal amount for quality control, maintenance.

Mr. PETTIS. Mr. Chairman, in 1985 there was a specific number of activities that had been identified that needed to be addressed, in particular one was the documentation of all of our modeling systems and our data systems, which were major activities.

All of our EIA models have been documented at this point in time. Rather than specifically request money for documentation, that is now included in our program level funding for each of the activities, such as oil and gas, each office is now including the funding for any documentation that has to be done in the future in its funding rather than as a separate quality item.

Chairman BYRD. Dr. Merklein—you testified at that time that $2.5 million would just hold you current.

Dr. MERKLEIN. Again, to expand on what Mr. Pettis said, the three major issues at the time were data systems documentation, survey audits, and model systems documentation. All models have now been documented. We are done with it. And we are probably going to start on a second round of documentation reviews to see if there are any changes needed.

But those are not anywhere near as intensive an effort as the original documentation. Data systems documentation, we have 64 data systems, 52 of which are done, 12 that remain incomplete and I believe they will be done this year.

We have survey audits. We have a total of 52. All but seven have been done, and they will be finished this year.

We are done with the major audits in our systems. We have also shifted, as Mr. Pettis mentioned, a substantial portion of our quality control over to the individual offices where the individual people dealing with the incoming data are more familiar with the problems that they face every day.

And those costs are absorbed through the individual office.

Allocations. Now we have had a disagreement with PART on that issue. PART wanted us to track each and every effort spent on quality control, even in the individual program offices. We thought that this would impose a very, very burdensome system where individuals would be asked of the 40 hours or so they spend a week working and how many of those hours are spent on what particular quality-related issues.

We thought that this would do nothing to improve our productivity at EIA. So we did not quite see eye to eye with PART on the handling of these charges. We said that rather distinctly in our comment on their original report.

This is the first time, by the way, that PART was a bit more critical than is their usual role to be. And one gets the impression in reading this year's PART report that there is something fundamentally different about EIA from preceding years.

But we don't think that is the case, so we have simply not resolved the issue between ourselves and the professional audit review team.

QUALITY FUNDING APPROACH

Chairman BYRD. It is easy to get the impression that there is something fundamentally different from the way you are approaching this matter from that which——

Dr. MERKLEIN. I realize that.

Chairman BYRD. From the position you took 2 years ago, when you said:

> Quality maintenance is an ongoing need. And funding at a stable level, which we are estimating to be about $2.5 million per year, is more efficient than trying to play catchup every few years, as was pointed out in the cost-benefit analysis cited above.

So it seems to me that the approach is somewhat different on your part.

Dr. MERKLEIN. Well, sir, we have spent some considerable amounts of money on quality control. As a matter of fact, I'm looking for this information and I might get a little help on this.

[Pause.]

Dr. MERKLEIN. This is important so I beg your indulgence here. We have an Office of Statistical Standards, OSS, within EIA. That office has a budget that was increased substantially over the past several years. Fiscal year 1984, the OSS budget was about $240,000 and 25 FTE's.

For fiscal year 1990, our request is for $1.22 million and 28 FTE's. The authorized staffing level in OSS has increased at the same time as the overall staffing level in EIA has declined.

We have squeezed our resources as much as we can, and every time we found another dollar it went into quality. We really do differ with PART on the report. And I think a very substantial portion of their report that ought to be taken very seriously is our rather lengthy comments in the back of that report.

Chairman BYRD. That still does not answer the question that we're trying to get at here.

Dr. MERKLEIN. Yes, sir; I do not have a quick answer off the top of my head on the $2.5 million, but I propose to submit it for the record, sir.

Chairman BYRD. So what are we to take for an answer to the question as to how much you are requesting in fiscal year 1990 for the quality contract budget?

Mr. PETTIS. Specifically, the amount related to what was called quality maintenance is approximately $1 million. There is also funding included in the individual program offices for quality activities. And there I don't have a specific number to tell you how much that amount is.

As Dr. Merklein mentioned, we also have funding in the Office of Statistical Standards. We could attempt to put together a number for you and supply it for the record. It is kind of an apples and oranges comparison when we refer back to the way we budgeted in 1985. That is different than the way we are budgeting now.

Chairman BYRD. All right. Suppose you do that.

[The information follows:]

QUALITY FUNDING

The Energy Information Administration (EIA) request for quality funds for fiscal year 1985 was $3 million which was subsequently increased to $4 million by Congressional action. The request for fiscal year 1986 was $2.5 million which was subsequently reduced to $2.3 million in accordance with the sequestration procedures of Gramm/Rudman/Hollings. The fiscal year 1990 request includes about $1.9 million for quality maintenance investments (QMI) and the Office of Statistical Standard's (OSS) activities. The difference in funding between fiscal year 1985 and fiscal year 1990 represents two occurrences.

First, the backlog of identifiable quality projects to bring data systems and models into compliance with EIA standards has been mostly eliminated. Significant investments in quality during EIA's formative years have paid off so that the quality of energy information is seldom at issue in energy debates as it was in the 1970's.

Second, as a management strategy we began accounting for quality funds differently. Program offices were made responsible for integrating into their routine operations those activities, such as documentation and frames maintenance, necessary to prevent any product deterioration. In other words, the cost of conducting a survey includes the cost necessary to maintain the quality of the survey in accordance with EIA standards. Requiring separate identification of these costs would be burdensome. We do continue to set aside between $700,000 and $800,000 annually for quality maintenance investments designed primarily to improve the quality of our processes and products or remedy any discovered deficiencies. In addition, the OSS budget is $1,222,000 for such activities as developing standards, conducting data system and model audits, systems integration and other quality oversight projects.

The budget justification for quality funding in fiscal year 1990 takes the same approach as was taken for both fiscal year 1988, which included about $1.7 million, and fiscal year 1989, which included about $1.9 million.

CREDIBILITY OF EIA STUDIES

Chairman BYRD. How did this compare—since you don't have the figure yet, but you might also keep in mind this question:

How does this compare with the request you made as part of your fiscal year 1988 and fiscal year 1989 budget justifications?

Dr. MERKLEIN. Right

Chairman BYRD. And your comments on the PART review, which you included in the PART report, you state, quote: "Our budget requests to Congress each year have included sufficient resources to carry out an effective and efficient quality control program."

You also, however, specifically rejected as being, quote, "noncost effective" the PART recommendation that EIA provides more precise financial data on the quality control program.

How are we to assess the sufficiency of the resources you are committing to quality control without more precise financial data?

Dr. MERKLEIN. Let me give a broad answer and then, for details, I will turn to Mr. Pettis.

The broad answer is: Has our credibility suffered lately?

And I would submit to you it has not, sir. We have done some rather wide-ranging studies, including, for example, the additional gas that would be forthcoming as a result of the natural gas decontrol that was reviewed by the Office of Technology Assessment, and we are within range of what they considered reasonable.

We have done a study, for example, of the crude oil reserves that are likely to be recoverable from the Arctic National Wildlife Refuge, and that study has been reviewed by the Office of Technology Assessment. And they were in agreement with our work.

We have done a study of the import fee. That study has also been reviewed by the General Accounting Office, and they are generally in agreement with what we said. Or, it is being reviewed, I should say. I have seen it in draft form.

Time and again, our studies have been found to be credible. And I will offer to you as empirical evidence of this that it is the Congress of the United States that has asked us more often than the administration to do studies for them, to help them analyze policies, and policy positions.

And I think the Congress, by and large, recognizes that our credibility has not been impinged by the findings of the PART report and that our data and the use of the data has been credible.

Now, there were eight PART recommendations that they had, some of which we agreed with. And we have either implemented or are implementing, and some of which we have not agreed with.

And perhaps Mr. Pettis wants to deal with those questions in detail.

Chairman **Byrd**. Before he does that, Congress created the professional audit review team, which is composed of members from Federal statistical and analytical agencies, so Congress must have felt that there was some justifiable need for this team.

Dr. **Merklein**. There is no problem with the basic concept of the PART.

FINANCIAL DATA ON QUALITY FUNDING

Chairman **Byrd**. So, when the report indicates that there are apparent weaknesses, then Congress perks up its ears. And so it is difficult for us to assess the sufficiency of the resources that you are committing to quality control without more precise information, more precise financial data.

So would you proceed?

Mr. **Pettis**. Sure. I would like to comment in general. Our comments back to PART address the issue of collecting data on funding of quality control. As I mentioned earlier, it is difficult because quality is such an integral part of our operations. I believe the final PART report, in fact, did modify that recommendation to say "more precise financial data on quality maintenance," and this is the $1 million category that I referred to earlier, which, in fact, we are tracking closely and providing precise financial data on.

I think the other issue though really is whether you get the cart before the horse or the horse before the cart.

In the process that we follow in EIA is we have had a rather rigorous planning process where we look at our activities on a long-range and short-term basis. And in that process, we try to identify quality issues that we think we need to address over the next 3 years.

And that is really the measure that we have to use to determine what resources are required. And I would say that, in my experience over the last few years, I believe that the resources we are requesting are adequate to cover those areas that we have identified in that process.

Chairman **Byrd**. Would you identify for the subcommittee the "resources" included in your fiscal year 1990 request that would be used to carry out, "an effective and efficient quality control program"?

Mr. **Pettis**. Yes, sir.

Chairman **Byrd**. Can you do that now?

Mr. **Pettis**. We will provide that to you.

Chairman **Byrd**. It is not something you can provide now.

Mr. **Pettis**. Again, I cannot right off the top of my head tell you how much within our individual program offices has been designated for quality activity other than the approximately $1 million that we have for this category called quality maintenance. I cannot do that off the top of my head.

Chairman **Byrd**. All right, if you would supply that for the record.

[The information follows:]

Quality Funding by Office

The contract funds set aside in the fiscal year 1990 budget for quality in each office are:

Office of Oil and Gas	$311,000
Office of Coal, Nuclear, Electric and Alternate Fuels	197,000
Office of Energy Markets and End Use	197,000
Office of Statistical Standards	1,222,000
Total quality set-aside	1,927,000

SURVEY AUDITS

Chairman **Byrd**. The PART report states on page 13:

> During the early 1980's, EIA shifted from an emphasis on the comprehensive and more costly program of validation studies within a 5-year cycle to a much more modest program of quality audits within an 8-year cycle. As of June 30, 1987, almost one-half of the forms that EIA was using in gathering and analyzing data had never been evaluated either through a quality audit or a validation study.

How many of the 1984 forms in use have yet to be evaluated?

Dr. **Merklein**. The reference is to what we call survey audits. And if it is that reference, then, as I mentioned earlier, we have done all but 7 of a total number of 52 and those 7 will be finished by the end of the year.

In regard to model documentation, they are all done.

In regard to data systems documentation, there are 12 left that are incomplete, and they will be done before the end of the year.

We will complete by the end of this year all of those models and surveys.

Chairman **Byrd**. In determining the ranking of forms to be evaluated, you rely primarily on the cost of each survey to the Government and the burden on the respondents.

Aren't the importance and reliability of the data more important factors in deciding which forms are to be evaluated?

Mr. **Pettis**. Absolutely. We would agree that those are important things. And, in fact, we do consider a high ranking of those items.

PART suggested that we should have a long-term plan for our audits which was developed in terms of the cost and burden of the surveys. Each year, before those audits, the specific audits to be conducted are determined. The factors that you mention, the importance of the survey, the reliability of the data, et cetera, are considered before the final decisions are made.

So we have no disagreement with PART on that.

Chairman **Byrd**. And the fact that EIA audits a form only once in 8 years, what steps have you taken to ensure that audit recommendations are implemented on a timely basis?

Mr. **Pettis**. That was one of the recommendations in the PART report, that there be a formal followup system. And we have, in fact, established a formal system, which is tracked continually.

NATURAL GAS FOR ELECTRIC POWER GENERATION

Chairman **Byrd**. On page 485 of your fiscal year 1990 budget justification, you state:

> By 1990, increased interest is expected in electrical generating capacity and the fuel mix used to generate electricity as current trends result in demand approaching available supply.

Will EIA be analyzing the increased use of natural gas for new, gas-fired cogeneration equipment, and for electric utility capacity additions?

Dr. **Merklein**. Could you repeat just the question again?

Chairman **Byrd**. Will EIA be analyzing the increased use of natural gas for new gas-fired cogeneration equipment and for electric utility capacity additions?

Dr. **Merklein**. We have done that, sir. We have just completed a study that was requested by Mr. Dingell on the long-term needs for natural gas. And, in brief, the results were that there will be a developing electricity capacity shortage in the late 1990's and that capacity shortage will likely be met through gas-fired generating plants, either cogeneration or utilities.

But, as a result of that, the current utilization of natural gas for utilities which runs at about 3-trillion cubic feet [Tcf] will rise to about 6-trillion Tcf, doubled by the year 2000.

Mr. Dingell asked us to carry the study forward to see whether there is enough gas to fuel those plants for the remaining life cycle of those plants, which, under normal circumstances, is 30 years.

There was an ambiguous answer that we gave based on the assumption that plants are retired after their normal operating life of 30 years. This would mean, of course, that by the year 2001, the first plants that are 30 years old will start going into retirement; and that by the year 2030, the last few that were built in the year 1999 would be retired.

If that is the case, there is enough natural gas in the United States to take on this increased load, except that we will increase imports. About 26 percent of the gas in the United States will at that stage come from imports, mostly from Canada.

However, there's also the possibility that utilities will not retire their plants because they know that something like 10 cents on the dollar, they can completely redo the plants.

They don't have a permitting problem to begin with and they can keep the plants alive longer. And I suppose, in the extreme case which we took just as an outside marker, they keep them alive up to 50-60 years; that is, they don't retire any of those plants that already existed and had been built leading up to the year 2000 by the year 2030. If that is the case, we cannot handle the additional 3 Tcf for the total volume of gas involved with our current estimates of the natural gas resources.

RESOURCE ESTIMATES

That is the conclusion. However, I should caution you that, as a general rule, the resource base expands as data become available. And this is our look today on a resource base 50 years out. It is something of an heroic assumption and, as a general rule, there have not been contractions of resource bases.

You are familiar with the repeated predictions over the history of this country that we should run out of oil and gas, and we never have. So the empirical evidence is that the resource base might expand rather than shrink.

And what I am saying is that our two conclusions, if anything, are conservative.

Chairman **Byrd**. How reliable are your resources as compared with coal?

Dr. **Merklein**. Well, coal is much more reliable, there's no question about it, because we have a huge amount of essentially proved coal reserves, whereas, our natural gas proved reserves are less than 200 Tcf. And that compares to a resource base depending on the price cutoff that you have on the order of maybe as much as 800 Tcf.

So there's no question that the body of proved coal reserves in this country is considerably larger relative to its use than to natural gas.

NATURAL GAS SUPPLIES

Chairman **Byrd**. Would you be examining trends associated with the amount of deliverable gas available, the rate of reserve additions and reliance on the spot market in lieu of long-term supply commitments?

Dr. **Merklein**. I would like to take those one at a time, sir. That was an awful lot that you threw at me.

Can you tick off the individual items again?

Chairman **Byrd**. The trends associated with the amount of deliverable gas available, will you be examining those trends?

Dr. **Merklein**. Deliverable gas available at the current point in time, of course, that is a reserve study into the future. We do that annually in our annual energy outlook; which takes us to the year 2000. We will expand that this year, probably to the year 2005 or maybe 2010. I'm not sure yet.

So we are doing that routinely.

Chairman **Byrd**. The answer is yes?

Dr. MERKLEIN. Yes; and what was the next item?

Chairman BYRD. The rate of reserve additions.

Dr. MERKLEIN. The rate of reserve additions, we do, of course, as part of our annual energy outlook. But it is so price-sensitive and price is such a great unknown these days that I feel not all that confident about the·reliability of precision of individual reserve additions.

Chairman BYRD. And, third, reliance on the spot market in lieu of long-term supply commitments.

Dr. MERKLEIN. The natural gas spot market has not exhibited the kind of success that the crude oil spot market has had. And I suppose, in part, that rests with the clumsiness of the deliverability of gas. It is not as easily transportable. It has to be more rigidly tied into longer-term arrangements as opposed to crude oil, which is easily transportable by almost any means, including barges, for example.

We are always aware of the spot market. I don't know that we have anything going on right now for EIA to specifically analyze the gas spot market. I just don't know that we are doing this now other than, haphazardly. We know what size it is, we know what the price is. We monitor that. But, we don't really seriously at the moment ask how that market is likely to evolve in the future.

And I would be a bit hesitant to get into that because this is a very speculative subject.

Chairman BYRD. Senator Domenici, do you have anything on EIA?

ACCURACY OF OIL PROJECTIONS

Senator DOMENICI. I have just two questions. Dr. Merklein, we are aware that one of your responsibilities is to produce quarterly reports and then annual reports to project crude oil production, domestic consumption, prices, and import levels. Looking back on DOE's annual energy outlook report of February 1987, EIA projections of crude oil production for 1987 and 1988 were more optimistic than actual experience. Would you supply for the record a table that compares your projections with actual trends in crude oil production, domestic oil consumption, oil prices, and oil import levels over the past 4 years?

To the extent that the projections were at variance with actual experience, I wonder if you could at least try to explain the differences.

Dr. MERKLEIN. Yes, sir; I think the one year when we were really very slow in picking up the developing decline in crude oil production was 1986. We had the collapse in 1986, where the price fell from $22 in January to less than $10 by the end of June and early July.

This caused the shutting down of a great many marginal oil wells and it also brought on in a 6-month period the reduction of approximately 800,000 barrels per day. We had a system that was not very good at catching those changes very quickly.

I have testified to that in the House where Mr. Sharp was concerned about this and called a specific hearing on that. With his enthusiastic support and a little prodding, we completely revised our system and we now have a form in the field, the first lease purchases, which we have cleaned up and revised, as a nearly coincident indicator of crude oil production.

The data in that form we had considered not good enough to use, but we have made it good enough now. As a result, in 1987, and I presume in 1988 as well, we were much better in capturing impending deviations from established production levels.

Senator **Domenici**. You will supply that?

Dr. **Merklein**. Yes; as a matter of fact, I thought of doing a little paper on that anyhow because we are proud of the way we are now keeping track of our production.

[The information follows:]

OIL PROJECTIONS VERSUS ACTUALS

The attached table displays the annual forecasts from the January issue of Short-Term Energy Outlook, (STEO) compared to actuals for each of the past 4 years. U.S. petroleum consumption forecasts were too low in 1986, 1987, and 1988, principally because the rate of economic growth was underestimated. Weather also played a significant role in the forecast errors, especially in 1988 when extreme conditions led to increased energy demand. For petroleum consumption in 1988, it is now estimated that one-fourth of the difference was due to unexpectedly severe weather conditions, two-thirds was due to higher-than-expected economic growth, and the remainder was due to the lower-than-expected oil prices. The dramatic price drop in 1986 was a significant factor in the higher-than-anticipated consumption that year.

Forecasts for crude oil production were generally accurate, except that the decline in 1986, which was due to the unanticipated collapse in oil prices that occurred that year, was not captured. Oil prices have been particularly difficult to predict during the past several years.

SHORT TERM ENERGY OUTLOOK [STEO], FORECASTS AND HISTORICAL DATA FOR U.S. OIL CONSUMPTION, PRODUCTION, PRICES AND IMPORTS, 1985–88

	1985			1986			1987			1988		
	STEO	Actual	Percent difference	STEO	Actual	Percent difference	STEO	Actual	Percent difference	STEO	Actual [1]	Percent difference
Total U.S. petroleum consumption (million barrels per day)	15.7	15.7	−0.3	15.8	16.3	−2.9	16.3	16.7	−2.3	16.7	17.2	−2.9
U.S. crude oil production (million barrels per day)	8.9	9.0	−0.7	9.0	8.7	3.2	8.2	8.4	−1.4	8.2	8.1	0.5
Imported crude oil price (dollars per barrel)	28.1	27.0	4.1	24.8	14.0	77.4	16.5	18.1	−9.0	17.3	14.7	17.4
Net petroleum imports, including SPR (million barrels per day)	4.6	4.3	7.5	4.6	5.4	−16.4	5.8	5.9	−2.5	6.0	6.4	−5.6
Economic growth (percent)	2.5	3.4		2.1	2.8		2.6	3.4		1.8	3.9	

[1] Based on latest estimates in January 1989 STEO.

Note.—Percentages used actuals as a base and were calculated prior to rounding.

RECOVERABLE OIL

Senator **Domenici**. My last question, Mr. Chairman, has to do with the large domestic reserves of oil that we can't get to because of price.

How much does your agency know about the reserves of oil that are commonly called secondary or tertiary recoverable oil?

I am of the opinion that most of our conventional drilling leaves about 70 percent of the oil in the ground. So, we go in and drill an oil well, and we get out 30 percent of the oil; we leave 70 percent of the oil right under that well. It is a very huge pool of oil—up to billions of barrels. It's a price-related problem in that the price of oil today is too low to make it profitable to recover it, but it is there.

It is like a big ocean of oil that we know is there. It is American oil. I would like to know how much EIA knows about those reserves in terms of the quantity of oil that is untapped.

Do you have any projections as to what price that oil would have to be at for us to classify it as a known reserve and count on it to meet future energy needs?

Dr. **Merklein**. In our reserve studies, we keep track of reserve additions by various categories. And one of them is revisions. And that is, as a general rule, additional reserves that are brought on usually by price increases that cause companies to do secondary and tertiary recovery, particularly tertiary; CO_2 injection is perhaps the most prevalent at this moment.

So we do keep track of these kinds of reserve additions year by year. We do not keep track of that prospectively. We just really don't know.

I can give you some rough figures.

Senator **Domenici**. The chairman has many items to cover, and I don't want to take too much time. Could you tell me briefly, where within the Department of Energy, the expertise resides that could give us modeling information about some kind of tax incentive program that would make it economically feasible to recover that oil? If we were to submit hypothetical tax incentives that would encourage the recovery of these American oil reserves, where in the Department would we be able to get some models developed?

Dr. **Merklein**. If you were to ask EIA today, we would have to get back and completely review this and essentially develop a model to do that.

The Office of Fossil Energy has a major petroleum model, but I do not know whether they have secondary and tertiary recovery as a prospective parameter in the model. I just don't know.

Senator **Domenici**. Thank you, Mr. Chairman.

Thank you very much.

Chairman **Byrd**. Yes, sir.

APPROPRIATIONS LANGUAGE

Your fiscal year 1990 budget justifications request three appropriation languages changes:

One, $1 million for computer operations remaining available until September 30, 1991.

Two, $3 million for end use consumption surveys shall remain available until expended.

And, three, a provision that would allow contracts under annual appropriations to have periods of performance which run for up to 12 months, beginning at any time during the fiscal year.

Would you explain these three language changes and provide the rationale in each case?

Dr. **Merklein**. Mr. Chairman, in broad terms, what this is intended to do is to make for a smoother flow of funds to enable us to do more efficiently what we have been doing over the years.

Now, for the details, with your permission, I would like Mr. Pettis to deal with the question.

Chairman **Byrd**. All right, Mr. Pettis.

Mr. **Pettis**. Again, there are three items that you mentioned. The first is we have asked for 2-year funds of $1 million for our computer system operations. We also asked for that language last year and it was provided, I believe.

The purpose of that is to operate a computer facility for the Department of Energy, not just for EIA. Many of these other activities are on no-year funds. If there is a hiatus of funding and we don't have an appropriation those people have funds to continue their operations.

They rely on our computer to do their work. This funding is for the software contracts that we have to initiate at the start of the fiscal year to continue the operation of the computer facilities.

The second item that you referred to is the consumption surveys. As Congress has requested in the past, we do these consumption surveys on a triennial basis and we try to keep the funding level by fully funding one or two of these surveys each year.

But the activities associated with those surveys actually cover a period of about 4 years from the time you are actually planning the survey until you collect the data and do the analysis and publish reports.

The problem is, when we get the funds in one year, we have to obligate all of those funds in the first year. And over the course of 4 years, that leaves us very little flexibility. And in the process, we might determine that changes have to be made if we find out the funds have been obligated to a contractor who doesn't have the types of resources that we need to do that work.

So, it just really gives us very little flexibility to deal with the unexpected over a 4-year span of time.

The third item that you referred to is related to the specific request for language to allow us to enter into 1-year contracts, but not necessarily coinciding with fiscal years. That is a complicated subject and I will try to simplify it.

Generally, we think that the way we are funding our contracts is consistent with the intention of Congress and the Comptroller General decisions. But I think it would be fair to say that we are in a grey area and there are some risks that we could, in fact, get an adverse decision. I think, over time, the Comptroller General decisions on the use of annual appropriations have become more constraining and we are simply asking for language that would remove the fiscal year barrier for a goal-oriented task.

For example, if we are developing a new data system and we issue a contract to plan that system, develop the computer programs, et cetera; that doesn't necessarily all fall within a fiscal year. It may go from one fiscal year to the next. We are simply asking for language that would make it clearly possible for that contract to run to completion.

And it would not require us to arbitrarily divide this work so that 6 months of it is funded out of one fiscal year and 6 months in another fiscal year, when the activity really is a single task.

Chairman BYRD. Why do you need both? The $1 million to remain available until September 30, 1991, and the variable 12-month authority?

Mr. PETTIS. Again, in essence, the $1 million for those contracts, in fact, is done on a fiscal year basis, the contracts for computer software. Those are initiated right at the start of a fiscal year.

And so we would need that money separately, at the start of the year. I might ask that we expand that fully for the record.

Chairman BYRD. Why do you have to wait to respond for the record? Why do we have to wait?

You must know why you're asking for both. Why do you need both? That's what the question is. One million dollars to remain available until September 30, 1991, and the variable 12-month authority.

[Pause.]

Mr. PETTIS. If we had the latter language that would allow this 1-year contracting, not necessarily coinciding with the fiscal year, that would eliminate the problem.

The only problem we might have is that if the funds were not available on October 1, if we did not have a continuing resolution, then we would not have funds available for the computer software contracts.

Chairman BYRD. Title I, section 106 of the Interior appropriations bill provides:

> Appropriations made in this title shall be available for obligation in connection with contracts issued by the General Services Administration for services or rentals for periods not in excess of 12 months beginning at any time during the fiscal year.

You don't feel that that is sufficient authority?

Mr. PETTIS. Mr. Chairman, I believe that language applies only to the Department of the Interior. It does not apply to us. And that is specifically what we are asking, is to have that same language apply to the Department of Energy.

Chairman BYRD. So that provision would meet your needs if similar authority were to be made for your agency?

Mr. PETTIS. That's correct. That's exactly where we found the language, in fact.

[The information follows:]

REQUEST FOR OTHER-THAN-ACTUAL APPROPRIATIONS

EIA is funded with one-year money. However, there are three areas where a clarification in appropriations language would permit EIA to conduct its contracting more efficiently.

First, for our computer operations, we are again requesting $1 million of two-year money, an amount which also was made available in last year's appropriation. Two-year money allows us to have fixed-schedule GSA contracts for software packages and maintenance effective on the first day of the fiscal year. These contracts are not available until the new fiscal year starts so the prior fiscal year's funds cannot be obligated on them. This language is necessary in order to maintain an uninterrupted and efficient computer center operation which supports both EIA and users outside EIA.

Second, we are requesting language which would allow contracts to run up to 12 months beginning at any time during the fiscal year. The language is similar to that currently in effect for the Department of the Interior. Most of the surveys and studies we conduct run a year or less, but seldom coincide precisely with the fiscal year. Strictly speaking, without this language, we could be required to stop and wait for new appropriated funds to become available in order to restart the contract support for projects which cross into the next fiscal year. We wish to avoid such arbitrary and inefficient divisions of work efforts.

Third, we are requesting $2 million of no-year money for our four triennial end-use consumption surveys, each of which runs approximately 4 years. With guidance contained in our fiscal year 1985 appropriations report we have been requesting funds for an entire survey in a single budget rather than partial funding for each survey each year. The obligation of contract funds at the beginning of a survey cycle to cover work for 4 years does not strictly conform to the contract requirements placed on annual appropriations, although it is responsive to committee guidance.

These proposals are not intended to circumvent annual Congressional oversight and review of EIA's budget, but rather to give us unambiguous direction to continue obtaining contract support in the most efficient manner.

FTE UTILIZATION

Chairman **Byrd**. I am told that the EIA has consistently used less FTE's than were requested in budgets submitted to the subcommittee. This is of concern to the subcommittee because we appropriate sufficient funding to cover all of the employees you request.

And then you employ a lesser number of people.

The concern is that appropriations which the subcommittee has provided for salaries may be used for other purposes. Last year, we asked some questions for the record on the subject. One question was: "Can we expect that next year we will find out that your actual FTE use was 397 in 1988, the same number of FTE's which had been 397 in fiscal 1987?"

The answer provided was that: "A successful recruiting program begun in October 1987 has enabled EIA's on board staffing level to rise rapidly." And, further: "We are confident that we can hold our own against attrition for the remainder of fiscal year and enter fiscal year 1989 at our full staffing level."

The subcommittee provided appropriations for 417 FTE's in fiscal year 1988. In your budget on page 487, it indicates that you used only 405.

If we were to make a conservative estimate that the salary and support costs for each FTE totaled $50,000, then by falling 12 FTE's short, you have saved maybe $600,000.

How much was the amount saved, and how did EIA spend these savings in fiscal year 1988?

Dr. **Merklein**. Mr. Chairman, this is a detailed question where we do need to submit detailed data for the record. My understanding is, for 1988, we were short five, so we had made progress. And my understanding is we are now fully staffed. We have had a terrible time, given the salary structure that we have, particularly for our Ph.D. statisticians, for example. The Office of Statistical Standards was particularly hard-pressed given the competitiveness of the salary structure to staff.

But, again, as I say, my understanding is that we are now fully staffed. But we will furnish additional information on that for the record, if that's all right with you.

Chairman **Byrd**. All right.

[The information follows:]

Budgeted Versus Actual FTE's

In fiscal year 1988 EIA requested 448 direct-funded full-time equivalents (FTE's) and utilized 437 for a shortfall of 11. A total of $726,000 was not required for salaries and benefits, about two-thirds of which relates to the FTE shortfall and the remainder to other factors such as Federal Employees Retirement System (FERS) contributions, promotions, grade distribution, and the like. As we have done in the past, we used the excess salaries and benefits funds to cover contract expenses necessary to accomplish work which could not be done by the unavailable in-house staff.

CURRENT FTE'S

Chairman **Byrd**. How many employees do you have on board today?

Dr. **Merklein**. I believe it is 468 direct plus indirect funded, but I have to look it up. I'm told that is approximately correct.

Chairman **Byrd**. Four hundred and sixty-eight?

Dr. **Merklein**. Yes, sir.

Chairman **Byrd**. And you are requesting how many?

Dr. **Merklein**. Four hundred and sixty-eight.

Chairman **Byrd**. Four hundred and sixty-eight for?

Dr. **Merklein**. For 1990.

Chairman **Byrd**. And you have 468 on board?

Dr. **Merklein**. That is my understanding, but we will confirm that. The current budget is 469. The proposed budget is 468.

Chairman **Byrd**. When you do not fill those positions, what is done with the savings?

Dr. **Merklein**. I would be hard-pressed to specifically designate any one individual project with the savings.

And, Larry, I don't know if you want to deal with it, but it does go into discretionary spending. And that means, for the most part, we do analyses, and for the most part these tend to be analyses that we are requested to do by the Hill.

Anything more specific I would have to defer for a future answer.

Mr. **Pettis**. Mr. Chairman, in the earlier years, where we had some problems with staffing, some of that funding was, in fact, used for contract support to make up for the inability to hire the staff at the time.

Chairman **Byrd**. Indicate for the record what savings have been made in each of the 5 preceding years as a result of positions not filled:

What have been the savings, and what distribution was made of those savings.

Dr. **Merklein**. All right.

[The information follows:]

FTE Utilization

The following table shows for each of the previous 5 years: (1) the difference between the amount budgeted and the amount committed to salaries and benefits at the end of the fiscal year, and (2) the difference between the number of direct funded full-time equivalents (FTE's) budgeted and the number utilized. A plus indicates more was committed or utilized than budgeted and minus indicates less.

	Salaries and benefits	FTE's
Fiscal year:		
1984	+$608,000	+24
1985	+361,000	+0
1986	+501,000	−35
1987	−699,000	−20
1988	−726,000	−11

Over the total 5 year period $45,000 more was committed than was budgeted for salaries and benefits. In fiscal year 1984 and fiscal year 1985 EIA was reducing its staffing levels through attrition without using reduction-in-force procedures which resulted in excess FTE utilization. Funds were transferred from contracts to salaries and benefits to cover the funding requirements. The fiscal year 1986 budget proposed a 5 percent pay reduction and was also subject to a Gramm/Rudman/Hollings sequestration. These reductions led us to delay hiring in order to live within available funding which nevertheless required a transfer of funds from contracts. In fiscal year 1987 and fiscal year 1988 we made substantial progress in hiring to get back up to full FTE utilization levels but still fell somewhat short. In those 2 years, the funds not needed for salaries and benefits were obligated on contracts in those areas where there were insufficient resources to get the job done.

EMPLOYMENT TARGETS

Chairman **Byrd**. Does the Department impose employment constraints upon EIA which preclude EIA from reaching its employment targets?

Dr. **Merklein**. No, sir; categorically not.

FUNDING FOR SALARIES AND BENEFITS

Chairman **Byrd**. Your budget request for fiscal year 1990 includes a base increase of $438,000 for salary and benefits pricing adjustments.

What are the components of that increase?

Dr. **Merklein**. The answer I am getting is strictly pay raises and inflation.

Chairman **Byrd**. All right. Would you supply for the record the breakdown?

[The information follows:]

Salaries and Benefits Funding

EIA's fiscal year 1990 budget request includes an increase of $798,000 for salaries and benefits. The largest component of this increase will cover the impact of the January 1989 pay raise. Without consideration of any future pay raises, we will need an additional $500,000 to cover salaries and benefits in fiscal year 1990 at fiscal year 1989 rates. Further, based on historical growth rates for 2 years, we will need an additional $49,000 to cover increased contributions to the Federal Employees Retirement System (FERS), and about $249,000 to cover normal cost growth associated with promotions and within-grade increases.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. All right, the subcommittee and the individual Senators will have additional questions for you to respond to the record.

We thank you very much, Dr. Merklein and Mr. Pettis.

Dr. **Merklein**. Thank you.

Mr. **Pettis**. Thank you.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Nonutility Power Producer Survey

Question: The justification states that the core program includes increased funding for analysis of electric power issues, short-term forecasting improvements and computer facilities. The funding for the electric power analysis is to continue the development of nonutility power producers survey. Is this the first time a nonutility survey has ever been done?

Answer: Prior to 1979, the Federal Power Commission and then the Energy Information Administration (EIA) collected data on installed capacity and electricity generation from industrial facilities with a capacity of 10 megawatts or more. That data collection was discontinued due to low electrical growth in the industrial sector. In 1985, the Federal Energy Regulatory Commission conducted a one-time survey designed to identify the status of facilities that applied for qualifying facility status under the Public Utility Regulatory Policies Act (PURPA). The survey results were incomplete and never released. Due to increased growth by nonutility facilities, we are proposing the Form EIA-867, "Nonutility Power Producer Report," which will be filed by both industrial and other nonutility entities with an electric generating capacity of 1 megawatt or more. Other EIA forms survey nonutility industries but do not capture the supply of electricity from these sources.

Question: Can you elaborate on the types of information you intend to compile from the survey?

Answer: The questions fall into three categories: electricity generation, installed capacity, and energy consumption. Generation is broken out into generation for own use and for sale to electric utilities. Installed capacity is reported by technology and location so that sufficient information is available to determine the nonutility contribution to electricity supply, particularly in areas that may need additional generation. Energy consumption is broken down by fossil fuel type and renewable sources such as wood and waste.

These data will be used by the Environmental Protection Agency and the Office of Fossil Energy in support of the National Acid Precipitation Assessment Program, and the Federal Energy Regulatory Commission in their effort to evaluate PURPA implementation. The data will also be used in producing our forecasts and in our regional analyses of electric supply issues.

Short-Term Forecasting Improvements

Question: How will you improve your short-term forecasting methods?

Answer: EIA plans to improve short-term forecasting methods by developing a PC-based, short-term energy forecasting model. The programming and documenting for a PC-based model will replace the current forecasting system used to develop projections for the Short-Term Energy Outlook, a quarterly EIA publication. The current system is implemented on the EIA mainframe computer using SAS and FORTRAN, as well as a specialized mainframe publication and graphics system. The new system will be closely linked and similar in structure to the PC-based forecasting system which has been used to produce the last two Annual Energy Outlooks. In addition to providing tangible benefits in reduced training and maintenance costs (because similar systems will be used for both short-and mid-term forecasts), the new system will enhance the ability of the EIA to provide quick-reaction studies. This approach will reduce the time necessary to develop publication-quality products along with associated graphics. A further benefit is that the analytic structure of such studies can be made readily accessible (in the form of PC-diskettes) to external analysts.

New Computer

Question: According to the justification, beginning in FY 1991 EIA's next long-term replacement of computer systems equipment is planned. This replacement will require a smooth payment schedule of approximately $1.5 - $2.0 million per year for five years in addition to routine out-year requirements (pg. 484). The out-year projections assume that EIA will absorb about one-third to one-half of this amount through productivity improvements. The remainder will be added to EIA's budget. Have you identified what productivity improvements would be made in FY 1991?

Answer: We have not identified the specific productivity improvements at this time. We know that general improvements from advanced computer techniques such as faster job turn-around time, quicker interactive response time, enhanced computer software tools, better data handling, and improved data management capabilities will be available.

Question: Can any be implemented in FY 1991?

Answer: The new computer system could not be installed until the second half of FY 1991 at the earliest. However, we are currently analyzing the situation, and a new computer may not be needed until a later date. Although some general improvements (mainly from increased speeds) would be available upon installation of the new computer system, many others would not be available until after conversion to a new computer software operating system. This conversion can take from 6 to 12 months.

Question: Are you indicating that the agency is not as productive as possible?

Answer: Not at all, but technological advances provide opportunities for increased productivity.

Multi-Year Funding

Question: In FY 1989, you requested $1.0 million of no-year funding for your computer operations. Congress modified this proposal and allowed that $1.0 million remain available for two years. Has the reduction of the availability of the funds to two years from the no-year request impacted the use of the computer?

Answer: The availability of two year funds versus no-year funds has not impacted the use of the EIA computer and we do not anticipate a negative impact so long as two-year funds are provided every fiscal year.

Question: In FY 1990, you have requested language to allow no-year funding for the triennial end-use energy consumption surveys, each of which spans about 4 years from start to finish (pg. 485). Are the funds for the surveys going to be requested every year?

Answer: No-year funds to provide funding for one or two of EIA's four triennial end-use consumption surveys will be requested every year.

Question: If so, why are no-year funds necessary?

Answer: Each of the 4 triennial end-use consumption surveys spans about 4 years. The obligation of contract funds at the beginning of a survey cycle to cover work for 4 years does not strictly conform to the contract requirements placed on annual appropriations. We have found that "no-year" funds are the most suitable method to fund a single activity which will span up to 4 years. For example, once single-year funds are obligated and the fiscal year is over, these funds are irreversibly committed to a specific contractor for the entire 4-year survey cycle. There is no flexibility to move these single-year funds to another contract if faced with unforeseen circumstances, such as a change in program scope or contractor non-performance. Using a no-year appropriation would provide the authority to efficiently deal with unanticipated events. (The "no-year" appropriation required in FY 1990 for the Residential Energy Consumption Survey is $2,000,000, instead of the $3,000,000 shown in the EIA proposed appropriation language on page 481 of the Department of Energy Budget request.)

Question: How were these being done in the past?

Answer: Each of these multi-year surveys was partially funded, year-by-year. Then, in its report on the FY 1985 appropriation, the House Committee stated that it expected "that future budget requests will include consumption surveys on a regular basis so that a rational planning process may occur without the uncertainties of whether funding will be available." For each of four different consumption surveys which are on triennial schedules, EIA has since been requesting funds for an entire survey in a single budget.

Question: In addition, you have requested language in administrative provisions which would allow contracts under annual appropriations to have periods of performance which would run for up to twelve months, beginning at any time during the fiscal year. The justification states that, without this language, you may be required to issue two separate tasks to coincide with the performance of the study. How did you get around this problem in the past?

Answer: EIA has interpreted that most of its work falls under the "bona fide" need exception. Under this exception, funds may be charged against the appropriation of the year in which a need arises, regardless of when the work was performed. When the work does not meet this exception, we issue two separate tasks to coincide with each fiscal year. There is considerable subjectivity involved in making these determinations. In addition, just having to make and defend the determinations is administratively burdensome. With the language as proposed, we would be able to fund each of our projects during its logical 12 month period, without consideration of whether or not the project extends beyond September 30 of each year. This proposed language was modeled on similar language currently operative in the appropriations bill for the Department of Interior.

Question: How many contracts were impacted by the lack of this language?

Answer: All EIA service contracts are impacted by the lack of this language.

Question: Why can't the contracts be written at any time during the year with the provision that they are subject to the availability of funds?

Answer: Consistent with its interpretation of the "bona fide" need exception, EIA fully funds each task with such an exception within the year in which the need for the work arises. Under EIA's one-year appropriation, funds only become available on a fiscal year basis. Thus, for tasks not meeting the exception, work ends September 30 or at the end of any continuing resolution and cannot be continued until funds are made available with a new continuing resolution or appropriation.

Current Program

Question: The justification states (pg. 485) that "no major enhancements to EIA's information program are contemplated for the next five years." What changes in the information program were discussed in coming to the conclusion?

Answer: We are currently satisfying the demand for energy information and do not anticipate any major changes in the energy situation over the next 5 years which would require a major enhancement to the energy information program. We have identified several minor changes and are in the process of incorporating those into the program. For example, we are adding questions to our petroleum marketing survey to obtain sales volume and price data on the new mid-grade unleaded motor gasoline being marketed. Further, we are requesting funds in this budget to conduct a new survey to collect information on electricity generation, installed capacity, and energy consumption from nonutility power producers which are becoming an important emerging source of electricity generation.

Question: Was this a policy decision or a budgetary decision?

Answer: The decision was really a combination of both budget and policy concerns in that we are trying to satisfy the demand for energy information at the lowest possible cost without sacrificing quality. This also involves realigning resources from year to year to meet changing requirements.

ADP Services

Question: Has the FY 1989 delay in some of the planned peripheral equipment purchases impacted your program?

Answer: Our program for FY 1989 has not been impacted by the delay. Our current configuration of disks, tapes, printers, and communications controllers is sufficient to accommodate user requirements during FY 1989.

Question: Can you elaborate on the $250,000 increase requested in FY 1990 for (pg. 496) increased facilities management costs?

Answer: The ADP facilities management contract provides equipment and software evaluation, installation, operation, maintenance, and user support for the mainframe, terminals, and personal computers of EIA's Forrestal Computer Facility. The facilities management contract has been recompeted which has resulted in increased costs.

Performance Evaluation

Question: In July of 1988, a performance evaluation was completed by the Professional Audit Review Team (PART). The evaluation contained three general recommendations covering quality control, the prioritization of quality audits and the adequacy of documentation. The official Department response was critical of the report. Has any of the report been incorporated in the FY 1990 budget or has the Department done all that it plans in response to the report?

Answer: EIA has implemented several of the PART recommendations and is currently implementing others. The nature of the recommendations is such that their implementation has no discrete significant impact on the budget.

Question: Do any of the short-term forecasting improvements relate to the audit?

Answer: While none of the recommendations specifically affect the planned short-term forecasting improvements, the general concerns of PART regarding documentation and quality will be kept in mind as we proceed.

Question: Was the final report altered to take into consideration some of your comments?

Answer: The report was not substantively altered in response to our comments.

Question: How do you feel an independent review should be structured?

Answer: Our suggestions regarding an independent review of EIA would be tailored after our own Independent Expert Review Program. Under that program, we retain recognized experts in their field to review our data systems, models, and analytical efforts. These reviews substantiate our efforts or make specific recommendations for improved methods, procedures and economic and statistical treatment of our analytical data collection activities.

We believe that in establishing PART the Congress intended to bring the vast experience of the established Government statistical agencies to the assistance of the EIA, at that time a newly established statistical agency. We have previously suggested to PART that the value of their activities to EIA would be greatly enhanced if the review were staffed by professional economists, statisticians, and operations research analysts from the statistical agencies represented on PART. Such individuals would have the knowledge and experience to make new, creative recommendations to improve the procedures and methodologies employed by EIA.

Residential Energy Consumption Survey

Question: You have tentatively planned to construct a new Residential Energy Consumption Survey sampling frame using data from the 1990 decennial census (pg. 485). According to the justification, since "all demographic surveys conducted by the Federal Government are based on population and demographic characteristics collected in the decennial census, the frame redesigns for all these surveys are being coordinated by an Office of Management and Budget task force." What does OMB know about energy surveys?

Answer: The Residential Energy Consumption Survey (RECS) is a survey of households which measures household energy consumption and expenditures, as well as the stock of energy consuming goods in the housing unit, so it is a demographic survey as well as an energy survey. OMB has oversight and coordination responsibilities covering all statistical agencies of the Government. They have formed a "Task Force on Household Survey Redesign" to coordinate the efforts of the various agencies which plan to redesign their surveys based on the results of the 1990 Decennial Census. This initiative was highlighted in President Bush's budget proposal "Building a Better America" (pg. 46) which noted that the "Demographic surveys across Government will be improved by the redesign of individual surveys reflecting decennial census results."

Question: Do you feel you have adequate input into this task force?

Answer: EIA is a member of the task force and participates fully in its activities.

Question: Why haven't funds been added to the out-year estimates since you must have a general idea on the needs and costs of the redesign of the sampling frame.

Answer: The cost estimates for the RECS redesign are not in the out-year estimates because we have not received a firm date from the Census Bureau as to data availability. Therefore, EIA has not undertaken all the detailed planning required to make these estimates.

International Information

Question: Since FY 1988, funding for the International and Contingency Information program has grown from $333,000 in FY 1988 to a request of $741,000 in FY 1990. How do you see this program evolving over the next three to five years?

Answer: The current outlook for the International and Contingency Information Program includes, in FY 1989, responding to the shifting demands for energy information, such as energy use in and exports from centrally planned economies. The FY 1990 increase will provide for automating the statistical responses the Department of Energy makes to energy questionnaires from international organizations such as the International Energy Agency, the United Nations, the Economic Commission for Europe, and the North Atlantic Treaty Organization. Future years should see a return, barring any emergency situations, to a level funded program of approximately $600,000 per year. It should be pointed out that funding for this program prior to FY 1988 was about $500,000 per year. The decrease in FY 1988 reflected increased funding from other agencies and a temporary delay in international model updating and development.

Centrally Planned Economies

Question: Please provide for the record additional information on the proposed $100,000 decrease due to the completion of Analysis of Market Economies and Centrally Planned Economies (pg. 488).

Answer: The funds are for a one-time report being done in FY 1989 which will not be required in FY 1990.

The analysis has not yet been completed. However, data collection and analysis are now underway to project Soviet gas production and trade potential with Western Europe, and the impact of Soviet gas imports on European natural gas demand by European country and end-use sector. We have purchased some preliminary data from commercial sources that provide an aggregated base for establishing improved historical and projected energy demand by fuel type within the Soviet Union and Soviet bloc nations, as well as credible data on energy trade with Western Europe.

We plan to examine the impact of world oil prices and economic growth within the Soviet Union on Soviet gas production and energy trade with Europe. Other areas to be addressed include Soviet gas price competitiveness with European gas suppliers and the flexibility of Soviet gas suppliers to meet future European gas demand.

ECONOMIC REGULATORY ADMINISTRATION

STATEMENT OF CHANDLER L. VAN ORMAN, ADMINISTRATOR

ACCOMPANIED BY:

MILTON C. LORENZ, CHIEF COUNSEL, OFFICE OF ENFORCEMENT LITIGATION

JERRY F. THOMPSON, DIRECTOR, OFFICE OF MANAGEMENT AND INFORMATION SYSTEMS

FRANK RUDDY, CHIEF COUNSEL, DEPARTMENT OF ENERGY

J. ALLEN WAMPLER, ASSISTANT SECRETARY FOR FOSSIL ENERGY

CONSTANCE L. BUCKLEY, ACTING DIRECTOR, OFFICE OF FUELS PROGRAMS

PREPARED STATEMENT

Chairman **BYRD**. Now, we will turn to the Economic Regulatory Administration.

Testifying in support of the fiscal year 1990 budget request is the Administrator of the Economic Regulatory Administration, Mr. Chandler L. van Orman. The 1990 budget request for the Economic Regulatory Administration is $15,103,000, which is $741,000 below the fiscal year 1989 enacted level.

Your statement, Mr. van Orman, will be made part of the record in its entirety. And if you would please introduce your supporting witnesses and summarize your statement, the subcommittee will have questions for you.

[The statement follows:]

STATEMENT OF CHANDLER L. VAN ORMAN

Mr. Chairman, members of the Committee, I appreciate this opportunity to provide testimony in support of the funding request for the Economic Regulatory Administration in FY 1990. As you know, the ERA is charged with the responsibility of completing regulatory enforcement actions related to crude oil and petroleum product pricing and allocation violations occurring from August 1973 through decontrol in January 1981.

Although President Reagan decontrolled the pricing and allocation of crude oil and petroleum products in January of 1981, the statutes creating the ERA are still in effect, and the responsibility for enforcing the law on violations occurring during the controlled period continues. ERA, together with its predecessor organizations, has audited over 20,000 petroleum firms and collected $6.8 billion in oil overcharge recoveries, with another $1 billion due from settlement agreements in which monies have not yet been received. Currently some 200 cases remain unresolved. It is the intention of this Administration to conclude as expeditiously and responsibly as possible, all remaining oil overcharge cases either by settlement or litigation.

Our objectives for FY 1990 are to resolve at least one-third of the remaining cases and collect as much overcharge monies as we can. To meet these goals, ERA will require funding to support 120 full-time equivalent (FTE) employees and $1.4 million for a litigation support contract. ERA continues to decrease in size as its caseload is reduced, and our funding request for FY 1990 reflects this position. The $11.7 million budget request for Compliance activities in FY 1990 represents an $837,000 and 20 FTE reduction from FY 1989 levels.

The budget request for the non-enforcement activities will fund 24 FTE's in the natural gas and electricity import/export programs, 10 FTE's for Program Administration, and 5 FTE's for the Fuels Conversion program. It also includes $500,000 to fund environmental impact statements and reliability assessments. The Department's objective with respect to natural gas imports is to assure that a reliable supply of gas and electricity is available to the American consumer at competitive prices. Our FY 1990 request for activities under the Fuel Use Act, as amended in May 1987, provides funding for the implementation of the prohibitions imposed or provided for by that law.

On January 6, 1989, former Secretary of Energy Herrington announced a restructuring of ERA in which the functions of the Fuels Conversion and Natural Gas and Electricity programs were transferred to the Assistant Secretary for Fossil Energy. The Department is currently in the process of completing the implementation of this action.

I believe that the Department's funding request will adequately support the fulfillment of all of our assigned responsibilities and at the same time remain fiscally responsible when allocating tax dollars to this effort. I would be happy to answer any questions the Committee may have.

BIOGRAPHY OF CHANDLER L. VAN ORMAN

Chandler L. van Orman was recess appointed on December 23, 1988, as Administrator, Economic Regulatory Administration, U.S. Department of Energy (DOE). In this position he is responsible for the management and direction of Economic Regulatory programs.

In addition, Mr. van Orman establishes and directs procedures for the orderly and expeditious completion of the enforcement program in developing policies regarding the import of natural gas and electricity. Mr. van Orman had served as Deputy and then Acting Administrator since July 13, 1987.

Prior to joining DOE, Mr. van Orman was a partner in the Washington, D.C. law firm of Wheeler & Wheeler. In this position he directed and managed significant administrative and judicial litigation on behalf of major domestic and international transportation, communication, corporate, and labor clients. In 1986, Mr. van Orman served as Executive Director of the Commission on Executive, Legislative and Judicial Salaries. In that position he reviewed the salary structure of the judiciary, Congress and senior Administration executives and submitted a report to the President. In 1983, Mr. van Orman was the Director of Private Sector Involvement and Counselor to the Administrator for the 1983 Economic Summit of Industrialized Nations.

From 1982-1983, Mr. van Orman served as General Counsel for the Agency for International Development (AID). As Chief Legal Officer for AID, he provided legal guidance to the Administrator regarding development and implementation of U.S. foreign aid legislation and policy. Before joining Wheeler & Wheeler in 1968, he was an attorney/investigator with the Federal Trade Commission. Prior to that, he was a professional staff member with the Anti-Trust and Monopoly Subcommittee, Committee on the Judiciary, U.S. Senate.

Mr. van Orman received an A.B. degree in political science from the University of North Carolina in 1963 and a J.D. degree from the University of Virginia Law School in 1966. He is a member of the Washington D.C. and Virginia Bars and is admitted to practice before the Supreme Court of the United States. He is also a member of the National Boating Safety Advisory Council and a coach of the U.S. Naval Academy Sailing Team.

BIOGRAPHY OF FRANK RUDDY

Frank Ruddy received a recess appointment as General Counsel of the Department of Energy (DOE) on November 22, 1988.

Before joining the Department, Mr. Ruddy was United States Ambassador to Equatorial Guinea from 1984-1988, and Assistant Administrator at USAID from 1981-1984. He had been Counsel for Exxon in Houston, Texas from 1974-1981. Prior to Exxon, he had worked as a Deputy General Counsel at USIA from 1973-1974, Senior Attorney in the Office of Telecommunication Policy, Executive Office of the President from 1972-1973, and as a Staff Attorney, USIA from 1969-1972.

Mr. Ruddy has French and Spanish, has written one book, edited 31 others, and had edited a professional legal journal for five years. He has an A.B. degree from Holy Cross, M.A. and LL.M. degrees from New York University, an LL.B. degree from Loyola in New Orleans, Louisiana and a Ph.D. degree from Cambridge where he also taught law from 1967-1969.

Mr. Ruddy is married to the former Kateri O'Neill and they have three sons. He is a legal resident of Texas and a member of the Texas, Washington, D.C. and New York bars. He received an Honorable Discharge from the Marine Corps Reserve in 1961.

BIOGRAPHY OF CONSTANCE L. BUCKLEY

Constance L. (Connie) Buckley was appointed Acting Director of Fuels Programs, Economic Regulatory Administration (ERA), U.S. Department of Energy (DOE), on May 31, 1988. The office administers DOE's natural gas and electricity import and export programs under the Natural Gas Act and Federal Power Act, the Presidential permit program for construction of border-crossing electric transmission lines, and residual regulatory functions under the Powerplant and Industrial Fuel Use Act (FUA) and the Public Utility Regulatory Policies Act.

Prior to her current assignment, Ms. Buckley was Director of ERA's Natural Gas Division from March 1986 to May 1988, and from December 1982 to March 1986 was the Chief of the Natural Gas Division's Case Management Branch charged with implementing DOE's natural gas import/export function.

Ms. Buckley joined the DOE's predecessor agency, the Federal Energy Administration (FEA) in August 1974. Her first assignment was to develop truck, bus and automobile fuel economy programs. Since that time, Ms. Buckley has held several positions including Senior Analyst, FEA Policy Office; working on policies related to natural gas, coal and conservation; Chief of ERA's Alternate Fuels and Technologies Branch, developing regulations pertaining to FUA; and Director of ERA's Industrial Conversion Division, implementing FUA as it pertained to industrial facilities.

Ms. Buckley began her government career in 1968 in Washington, D.C., as a Program Analyst for the Office of Economic Opportunity. From 1972 to 1974 she served as a Compliance Analyst for the Price Commission and Cost of Living Council.

Ms. Buckley received a B.A. degree from the University of California at Berkeley in 1968. She received an M.S. degree from Simmons College in Boston in 1972. She has received numerous Outstanding Performance awards and was selected to participate in the DOE's first Senior Executive Service Candidate program.

Ms. Buckley was born in Roswell, New Mexico, grew up in Sacramento, California, and resides in Washington, D.C.

INTRODUCTION OF ASSOCIATES

Mr. VAN ORMAN. On my far left is Ms. Connie Buckley, who is the Deputy Director of the Office of Fuels Programs, currently in the Office of Fossil Energy.

On my left is Allen Wampler, Assistant Secretary for Fossil Energy.

On my right, Jerry F. Thompson, Director of the Office of Management and Information Systems in ERA.

On his right, Milt Lorenz, who is the Chief Counsel of the Office of Enforcement Litigation of ERA.

On his right, Mr. Frank Ruddy of the General Counsel's Office for the Department.

OPENING STATEMENT

Mr. VAN ORMAN. The ERA continues to work itself out of business of the more than 100,000 audits conducted and of the thousands of cases brought, less than 200 remain today.

Last calendar year, we resolved approximately 70 cases, including some of the largest and most contentious cases ever brought.

During the same year, we petitioned for collection of $1.4 billion. We plan to resolve an additional 20 to 30 cases during the remainder of fiscal year 1989. I wish I could give you a date by when the program would be terminated, but I can't.

I don't know precisely how much we will end up collecting, nor do I know the specific date by when that would be collected.

I can tell you, Mr. Chairman, that we are committed to the expeditious and responsible phase out of the Crude Oil Enforcement Program. We are headed in the right direction and we are moving with deliberate speed.

ERA REORGANIZATION

Chairman BYRD. Would you explain the reorganization of the Economic Regulatory Administration?

Mr. VAN ORMAN. It is more of a restructuring than a reorganization. The Office of Fuels Programs, which authorizes import and export of all natural gas, hence, electricity functions and curtailment and allotment of natural gas authority, was transferred by Secretary Herrington to the Office of Fossil Energy effective January 6.

This comports with recommendations made to several Secretaries by several prior Administrators to remove that function from ERA. The remaining restructuring of ERA involves simply a new reporting mechanism according to which the Administrator of ERA reports to the Secretary, through the General Counsel.

Chairman BYRD. Do you, as the Administrator of the Economic Regulatory Administration, retain any residual responsibilities for the natural gas and electricity operations or the fuel conversion activities?

Mr. VAN ORMAN. No, Mr. Chairman. It's my understanding that all of these authorities have been transferred to Mr. Wampler's shop.

Chairman BYRD. Which of the ERA functions now report to the Secretary through the General Counsel?

Mr. VAN ORMAN. All of the functions involving the enforcement program, the crude oil allocation, overcharge collection program.

Chairman BYRD. Were any other ERA functions absorbed over in DOE?

Mr. VAN ORMAN. Some emergency allocation authority has been absorbed by the Office of International Affairs and Energy Emergencies. I believe there were some.

Chairman BYRD. Will you provide a table showing the number of ERA personnel and the appropriation amounts by activity for fiscal year 1989 and 1990? And indicate which of the personnel and the various appropriation amounts will be reassigned within the Department.

Mr. VAN ORMAN. Mr. Chairman, we would be happy to provide that.

[The information follows:]

ERA REORGANIZATION

The following chart shows the FTE's, appropriation, and reporting activity of the ERA programs in fiscal year 1989 and fiscal year 1990 as a result of the reorganization of the ERA in January, 1989:

Program	Fiscal year 1989 appropriation		Fiscal year 1990 request	
	FTE's	Funding	FTE's	Funding
Reporting to the Secretary through the general counsel:				
Compliance	140	$12,511	120	$11,674
Program administration	10	712	10	761
Subtotal	150	13,223	130	12,435
Transferred to fossil energy:				
Fuels conversion	5	356	5	362
Natural gas and electricity	24	2,265	24	2,306
Subtotal	29	2,621	29	2,668
Total	179	15,844	159	15,103

REPORTING STRUCTURE

Chairman **Byrd**. To whom does the ERA Administrator now report?

Mr. **van Orman**. The Administrator currently reports to the Secretary; however, utilizing the new reporting chain, the Administrator would report through the General Counsel.

Chairman **Byrd**. Prior to utilizing the new reporting?

Mr. **van Orman**. Prior to that, I reported directly to the Secretary.

PURPOSE OF REORGANIZATION

Chairman **Byrd**. What is the purpose of having the Administrator report to the Secretary through the General Counsel?

Mr. **van Orman**. Mr. Chairman, I wish I could give you an answer to that question. Unfortunately, I can't. This was a restructuring that was instituted by Secretary Herrington shortly before he left. And it was never fully explained to me as to why this particular method had been adopted.

Chairman **Byrd**. Does this mean the General Counsel now has the authority to approve and disapprove actions taken by the ERA Administrator?

Mr. **van Orman**. No, sir; my understanding is the General Counsel exercises no more or any less authority over ERA than the General Counsel did prior to the restructuring.

Chairman **Byrd**. What impact will creating another level of review have on your ability to complete your remaining and resolved cases in a timely fashion?

Mr. **van Orman**. Mr. Chairman, I don't view this restructuring as the creation of another level of review. We have yet to test this because I have yet to submit to the Secretary any report through the General Counsel.

I would hope that it has absolutely no effect, no negative effect on the resolution of the cases.

Chairman **Byrd**. Then I get back to the question of what is the purpose. You have indicated you don't know the response to that.

Mr. **van Orman**. I do not. I testified before the House that, in my opinion, it was an attempt by the Secretary to devisualize, coining a new word, the enforcement program.

Other than that, I can't answer.

Chairman **Byrd**. Are decisions being made in a timely fashion by the General Counsel?

Mr. **van Orman**. The General Counsel does not have, to the best of my knowledge, any case before it on which a decision is necessary.

ERA is continuing to make decisions in a timely fashion and resolve cases where they can be resolved.

Chairman **Byrd**. I suppose, since you cannot explain the rationale for the reorganization, you have made excellent progress, it seems to me, today and it also appears that there could be disruptions that would result from the reorganization.

Mr. **van Orman**. Mr. Chairman, we are proceeding as expeditiously as we can. It was never the Secretary's intention, to the best of my knowledge, to interpose any obstacles in the course of ERA resolving, in a timely fashion, its cases.

And we don't sense that it's going to happen.

Chairman **Byrd**. I will ask the General Counsel his understanding of this.

Mr. **Ruddy**. I think, Mr. Chairman, and, again, I'm putting myself into what the Secretary had in mind when he made the decision. But I think what the Secretary had in mind was more or less codifying something which had been a relationship between ERA and the General Counsel's Office, at least in recent times.

ERA is concerned now in its enforcement activities, namely, with matters that would be considered commercial litigation matters.

And in this area, we simply make ourselves available to give whatever counsel we might be able to give to the ERA.

IMPACT ON ERA OPINION ON NPR

Chairman **Byrd**. What impact will this reorganization have on ERA operating costs?

Mr. **van Orman**. Regarding the costs, Mr. Chairman, it should have no impact at all. The money appropriated for the Office of Fuels Programs was intended to be used by that office and it will not result in any decrease of funding, nor will result in any increase in funding.

GENERAL COUNSEL OPINION ON NPR

Chairman **Byrd**. We learned at a hearing before the subcommittee last week of an issue associated with the naval petroleum reserves that NPR managers have been waiting for more than 2 months for an opinion from the General Counsel's Office.

Would you like to comment on that?

Mr. **Ruddy**. I would be happy to comment on that. I'm not familiar with the opinion.

Chairman **Byrd**. The $500 limit on the spending for—$500,000.

Mr. **Ruddy**. We have provided that opinion verbally. I'm not sure whether we have given an opinion in writing on that. We did say, Mr. Chairman, that that $500,000 limit is a difficult question. We did not make that apply prospectively and, therefore, it was not a limitation.

Chairman BYRD. You say you have responded already and made a decision?

Mr. RUDDY. The opinion has been communicated, Mr. Chairman. There is a memo. Whether that memo has actually been sent to the field yet or not, I don't know. An opinion has been completed.

Chairman BYRD. When was that?

Mr. RUDDY. I would say the opinion I saw was about 1 week old. I would be very happy to let you know when it was communicated. I reviewed it myself. I think it was correct as a matter of law.

There were some minor points, drafting points, style points that were being corrected. But they were not substantive matters.

Chairman BYRD. And what was the opinion?

Mr. RUDDY. The opinion, basically, Mr. Chairman, was that the limitation that affected the $500,000 amount was affected for the year in which it applied. It had had no perspective.

Chairman BYRD. Will there be a formal written opinion?

Mr. RUDDY. Yes, sir; I would be very happy to get that directly to you.

Chairman BYRD. In this subcommittee can you assure that the effort to devisualize the ERA will in no way diminish an aggressive pursuit of its mission?

Mr. VAN ORMAN. Absolutely, Mr. Chairman, I sit before you and give you my absolute, unconditional assurance that ERA will continue to prosecute the cases in its inventory in a responsible, expeditious way, collecting for the Treasury and the States and individuals as much money as we are able to collect.

Chairman BYRD. What actions remain to be completed in this reorganization?

Mr. VAN ORMAN. I don't believe any remain with the exception of internal reprogramming of the funds for the Office of Fuels Programs.

REPROGRAMMING GUIDELINES

Chairman BYRD. This subcommittee has reprogramming guidelines which require approval of any significant reorganization.

Are you aware of those?

Mr. VAN ORMAN. I have been told they exist, yes, sir.

Chairman BYRD. I will read them to you.

"A reprogramming shall also consist of any significant departure from the program described in the agency's budget justifications. This includes proposed reorganizations, even without a change in funding."

Can you answer why the Secretary approved the reorganization on January 5, 1989, and did not inform the subcommittee until January 19, 1989?

Mr. VAN ORMAN. Mr. Chairman, I do not know the answer to that question. The restructuring was visited upon the ERA and then we were notified that it had taken place. And at that point, the only thing left to do was to implement what the Secretary had decreed.

Chairman BYRD. Did anyone raise a question as to whether or not the subcommittee had been contacted?

Mr. VAN ORMAN. I do not know the answer to that question.

Chairman Byrd. Does anybody else know the answer?

Mr. Ruddy. I think, Mr. Chairman, during the last days of Secretary Herrington's stewardship, there were a number of things that he was trying to accomplish. I think restructuring of the ERA to make it more efficient and perhaps more consistent with the needs today was an important mission for him.

As I said, as I testified in front of the House, there really was no excuse for the notification not reaching the Hill until January 19. However, I think it certainly was the result of confusion and some sort of hectic goings on.

We did have a press release that was issued January 4 or 5, and a letter was forwarded to Congressman Dingell and Congressman Lent. We have no excuse for the letter advising this subcommittee to arrive on the 19th. It happened and we do not justify it. It shouldn't have happened.

Chairman Byrd. Were you aware of the reprogramming procedures?

Mr. Ruddy. Yes, I was.

Chairman Byrd. Did you advise the Secretary pro or con concerning those procedures?

Mr. Ruddy. I advised the Secretary that, in view of this conflict we had a choice:

If this were to be done before he left office, we really had no choice but to make a decision between the conflicts which existed in the guidelines that you mentioned in our own DOE procedures which, as you know, Mr. Chairman, are meant to create harmonious relations with the Hill and with this committee, as well as others, and the laws of the Department of Energy which allow the Secretary to make any changes with ERA that he wished.

I think this is a unique situation, one in which the Secretary wanted to get something done within his watch, and the kind of notifications that we might ordinarily make would not have been possible if that were to be done.

Let me note in that respect, although there is a technical violation of the guidelines here, that, in effect, there is no substantive change in what ERA is doing. The appropriations accounts remain the same. The functions that were transferred are the same functions.

There is no reduction in the enforcement activities of ERA as a body. The reporting on the dotted line through me to the Secretary in no way affects the Administrator's discretion.

The answer is: Yes; I do know about it. And I told the Secretary what his options were.

Chairman Byrd. Would you be approving or disapproving the decisions which Mr. van Orman now makes?

Mr. Ruddy. I won't be approving them or disapproving them, Mr. Chairman. Basically, they will simply come through me.

We've never actually had anything come through me to date. If there were some decision as a matter of law that I had to take exception to, I would communicate that to Mr. van Orman. But I don't see that happening.

SUBCOMMITTEE NOTIFICATION

Chairman BYRD. How difficult do you think it would have been to have informed the subcommittee of this reorganization before issuing a press release and proceeding?

Mr. RUDDY. I don't think it would have been difficult at all, Mr. Chairman. I don't think there was any design, any conscious design not to inform the subcommittee.

As I mentioned, things were——

Chairman BYRD. Shouldn't there have been a conscious design to inform the subcommittee?

Mr. RUDDY. Yes, sir; there should have been. We have no excuse for that, but we have some mitigating factors. Things were happening very quickly. There were a lot of things that were being wound up on kind of a rush basis, and this was one where we slipped up, and there is no excuse for it.

Chairman BYRD. I don't think that's an excuse or even a good reason.

Mr. RUDDY. It may not be a good reason, and it may not be an excuse, Mr. Chairman. As a matter of fact, we would acknowledge that this was something that should not have happened.

Chairman BYRD. So, where do we go from here if it should not have happened?

Mr. RUDDY. The fact is, Mr. Chairman, that it did happen and we certainly would like to maintain communications with the subcommittee and the very good working relationship.

And I hope that what has happened in this instance can be taken into account given the hectic days toward the end of the last administration.

And we certainly will make a special effort to make sure that the committee, the subcommittee, is kept informed of any such activities in the future.

Chairman BYRD. You have not gotten the subcommittee's approval yet.

Mr. RUDDY. No, sir; we haven't.

Chairman BYRD. So?

Mr. RUDDY. Mr. Chairman, we had a difficult situation. It is something that we ordinarily would have gone through in the course of events. But this was a decision that was taken by the Secretary under his power and under his statutory power as the Secretary of Energy.

And although we regret that the formalities were not——

Chairman BYRD. These are not just formalities. These aren't just formalities, getting reprogramming approval from the subcommittee, from the Appropriations Committee. These aren't formalities.

I should think it would only take a moment to call the chairman on the telephone and discuss it and see where we go from there before proceeding.

And here we find it out 10 days later.

The action was taken on the 6th. The letter came up on the 19th. It didn't seek approval, just announced, let us know it had been done.

Let's see how it works out.

SETTLEMENT AGREEMENTS

You state in your fiscal year 1990 budget justification that $1 billion is used for settlement agreements in which moneys have not yet been received.

Why has the money not yet been received?

Mr. VAN ORMAN. Mr. Chairman, in many cases, the terms afforded to a company extend over a period of years; taking the Texaco settlement, for example, it was $1,250,000,000.

That settlement extends over approximately 5½ years because even Texaco could not come up with that amount of money in a short time.

We have a number of cases that extend 4, 5, and 6 years and the companies' compliance with the terms of the consent orders are monitored closely. And if the companies become delinquent in their payments, serious attempts are made to collect the money.

And, ultimately, the cases are referred to the Department of Justice for collection.

Chairman BYRD. The budget justification states that ERA has 200 cases remaining unresolved.

What is your estimate of the dollar value of the remaining cases?

Mr. VAN ORMAN. That is an extremely difficult question to answer, Mr. Chairman, simply because of the nature of the cases that we have. As of today, we have 188 cases remaining, I'm happy to report. I believe 52 of those cases are in bankruptcy, and the amount of money we are requesting in those cases in total will nowhere approach the amount of money we actually receive.

In answer to your question as to the value of the remaining cases, it would be somewhere in the vicinity of $300 to $500 million.

RATIONALE FOR REORGANIZATION

Chairman BYRD. Well, you couldn't explain the rationale behind the reorganization. What do you think of it? How does it strike you?

Mr. VAN ORMAN. It strikes me as fairly neutral. I am not upset at it nor am I wildly enthusiastic. I can tell you that from ERA's perspective, we propose to continue prosecuting companies who have overcharged. We will continue to litigate vigorously those cases that are in various stages of litigation, and we will continue to collect as much money as we can and still resolve these cases in an expeditious and responsible fashion.

My feeling right now is that the whole restructuring of the organization is pretty much of a neutral thing.

Chairman BYRD. I suspect it has to be, doesn't it, as far as you're concerned?

Mr. VAN ORMAN. Well, I suspect it could have been done in a much more onerous fashion than was done. I'm happy to report that there have been interposed no additional layers of review or concurrence with respect to the decisions that we make.

BUDGET JUSTIFICATION

Chairman BYRD. The budget justification states that at the beginning of fiscal year 1990 there will be about 150 cases then pending litigation, including about 50 cases in bankruptcy proceedings and approximately $300 to $500 million in recoveries still to be collected.

You state that it is your objective in fiscal year 1990 to resolve at least one-third of the remaining cases and collect one-half of the remaining uncollected oil overcharge money.

How does this compare with the number of cases resolved and the amount of money collected in fiscal year 1988, fiscal year 1989?

Mr. VAN ORMAN. It is fairly consistent with our estimates, understanding, as you well do, that estimating necessary funding in the future depends upon a lot of factors. Many of the factors in our estimates are beyond our control.

We exercise little control over decisions by bankruptcy courts, by administrative law judges in FERC, and in our Office of Hearings and Appeals, we have cases pending, just waiting for decision.

We take a look at the cases in our inventory, the various stages of litigation of those cases, and the value to the best extent we can compute that value. And that is also a moving target based on the financial health of the respondent companies.

And then we make an estimate as to how many cases we think we can settle over a given period of time. One thing that perplexes me is the fact that based on our litigation record, which is an enviable record, more companies have not come in to seek some sort of settlement with the Department.

We fully anticipated that more companies would have. We stand ready and willing to negotiate with any company to effectuate a fair and reasonable settlement.

Some companies just won't talk to us. They want to litigate their case until the bitter end. And because of their constitutional rights of due process, they can do that and it is something over which we exercise little control.

MAJOR CASES REMAINING

Chairman BYRD. What are the major cases that remain to be resolved?

Mr. VAN ORMAN. Two in particular, Mr. Chairman. A case involving Cities Service in which we have an executed consent order involving the repayment by that company of $205 million. That has not yet become final.

The second case is one against Solomon Brothers and that case is in settlement negotiations right now. It is a fairly sensitive subject.

There are other cases whose dollar value is quite significant but because of the financial condition of the respondent, in all probability, we will get nothing, or very little.

Chairman BYRD. How was the $1.25 billion from the Texaco settlement distributed?

Mr. VAN ORMAN. Forty percent will be distributed to the Federal Treasury; 40 percent will be divided among the States according to the stripper well formula; and 20 percent will be set aside for subpart (v) proceedings, which involve refunds to individuals who can come in and claim the fair entitlement refund.

Chairman BYRD. What is your estimate of the deficiencies in the stripper well?

Mr. **van Orman**. Legal deficiencies. I would respectfully refer that question to Mr. Lorenz.

Mr. **Lorenz**. Mr. Chairman, I think you are referring to the amounts of money that should have been posted and were not. I believe, at this point, we would estimate a figure in the range of $200 to $250 million left to collect. That would include one rather large case pending against what had been Gulf Oil, succeeded by Exxon. And that is something like $175 million.

The amount of interest is also an issue in that case. It continues to change every day.

VOLUME OF IMPORTED NATURAL GAS

Chairman **Byrd**. What is your estimate of the volume of natural gas imported to the United States in 1989?

Mr. **van Orman**. Mr. Chairman, may I direct that question to Ms. Connie Buckley?

Ms. **Buckley**. It is about 1.3 Tcf.

Chairman **Byrd**. And what are the sources?

Ms. **Buckley**. About 97 to 98 percent comes from Canada. A small percentage comes from Algeria, a very small percentage.

Chairman **Byrd**. How does this compare with 1987 and 1988?

Ms. **Buckley**. It has been a steady increase since 1987. I don't know what the number will be for 1989, although predictions would be that it would be even a little larger. In 1987 it was about 1 Tcf. It is an increase.

Chairman **Byrd**. And the year before?

Ms. **Buckley**. About 750 Bcf. There has been a steady increase in those years.

Chairman **Byrd**. Do you anticipate that continuing along at about the same curve?

Ms. **Buckley**. It will be capacity constrained. The capacity that exists, the pipeline capacity that brings gas in from Canada, which is where most of the imports come from, ranges about 1.5 to 1.7 Tcf. The capacity is supposed to be 2.1 Tcf but, in reality, it is less than that.

Chairman **Byrd**. Where is the bulk of this imported gas going?

Ms. **Buckley**. The Northwest and the west coast. Some to the North Central States. There is a growing market in New England.

Chairman **Byrd**. How much of this imported gas is sold under long-term contracts?

Ms. **Buckley**. About three-quarters of it; 75 percent of it.

Chairman **Byrd**. In your budget justification last year, you projected about 66 orders would be issued in 1988 on natural gas import and export applications.

The Office of Fuels Programs indicates that 96 orders were issued, representing almost a 50-percent increase over the 65 orders issued in 1987.

The Office of Fuels Programs also projects that gas imports, gas sales to the United States are expected to reach a new historic high in 1989. You are requesting in fiscal year 1990 no increase in staff and only a 2-percent increase in funding for the natural gas and electricity operations.

Is this request sufficient, given the increased workload?

Mr. Wampler. We think the number of applications will remain fairly constant for 1990, so we think that that number is sufficient. We have asked for some additional funding and contract support for EIS's, for example, but we think, with the workload that we anticipate, the number of people we have in the budget, that it will be sufficient.

And, Connie, you can add to that if you would like.

Ms. Buckley. The only addition is that a lot of the numbers of orders we issued are for blanket authorizations and they are fairly routine proceedings to process. So they are not as resource-dependent as some of the long terms are.

So we can handle them with existing resources.

REVIEW OF APPLICATIONS

Chairman Byrd. Do you just rubber-stamp your approval on these applications?

Ms. Buckley. No; we do review the applications, and we do review them carefully. But, in the case of a blanket authorization, because what we are reviewing is whether or not the applicant is willing to adhere to fairly stringent reporting requirements and we don't have a contract review, because that is not submitted up front, there is not a lot of time required for the review; whereas, for a long-term authorization we examine the contract very carefully.

Chairman Byrd. Is careful enough consideration given to the impact of the U.S. economy and the potential for regions of the United States to develop a dependence on insecure supplies, or on supplies at insecure prices?

Ms. Buckley. Security of supply is something that we look at carefully. In the case of short-term applications, the blankets are aimed at the spot market, we don't feel supply dependence is as critical. You're talking a short-term timeframe and you're talking of contracts that run a month or two at a time.

It is a serious issue when you talk long-term contracts and it is something that is a significant part of our consideration.

PROCESSING OF NATURAL GAS APPLICATIONS

Chairman Byrd. You indicated in your responses to the record at last year's hearing that an increase substantially beyond the 66 orders you projected for 1988 would extend processing time.

Now, 96 orders were actually issued, so that would be a substantial increase, it would seem.

To what extent has the time required to process an order increased?

Ms. Buckley. I'm going to have to supply that answer for the record. I don't think it has increased, but I would have to go back and calculate that.

Chairman Byrd. If it hasn't increased, do you agree that 96 orders is a substantial increase over the 66 orders which were projected, at which time it was indicated that such a substantial increase would extend processing time?

Now you say you don't think the processing time would be increased.

Ms. Buckley. I'd have to go back and look, but I suspect we were assuming a greater percentage of cases to be long-term applications, which do require a substantial amount of time and resources. And we ended up with more short-term applications. The balance was different than we had anticipated when we made the projection.

[The information follows:]

Increase in Time for Processing Gas Applications

The processing time for gas import applications varies, depending on the complexity of an application, the level of opposition, and the level of an environmental analysis required by the National Environmental Policy Act (NEPA). Simple applications require 60 to 90 days to process; complex ones can take over a year.

Since 1984, the changing nature of the United States' gas market has led to a number of innovative and complex import arrangements that have required additional processing time for analysis. Additionally, the number and complexity of protests that have been filed concerning import applications have increased substantially since 1985. Finally, the number of import applications that involve construction and therefore NEPA analysis has increased. All of these factors have combined to increase the average processing time for import applications over the past several years.

The Department issued 65 import/export orders in 1987 and 96 orders in 1988. The average processing time in 1987 was 147 days; 120 days for short term authorizations and 207 days for long term authorizations. In 1988, the average processing time was 132 days, 105 days for short term authorizations and 235 days for long term authorizations.

IMPORT APPLICATION INCREASES

Chairman Byrd. Has the increase in import applications resulted in a proportion of increase in the number of environmental impact reviews that you are required to complete?

Ms. Buckley. Yes; although it is not the number, per se. It is the kind of projects that they involve. Traditionally, when it involves pipeline construction, FERC also has a certification review and they traditionally have done the environmental analysis required to comply with NEPA.

We have essentially piggybacked on their analysis. As more and more cogeneration facilities and direct imports are occurring, they don't always include any interstate pipeline construction.

And as a result, FERC is not always involved. Therefore, we can't rely on them to do the analysis and we have to do it ourselves, or we have to cooperate with some other agency that might be involved in some form of permitting, like the Bureau of Land Management or the Corps of Engineers.

In those cases, we are performing analyses we didn't ever have to before. So our level of activity on the environmental side has increased.

IMPORTING ELECTRICITY FROM CANADA

Chairman Byrd. Electricity. Less electricity is being imported from Canada?

Ms. Buckley. It is about 1.7 percent. The number is 46.3 billion kilowatt hours for 1987.

Chairman Byrd. Has that number been increasing?

Ms. Buckley. Yes; it has.

Chairman Byrd. Over a period——

Ms. BUCKLEY. Really, since 1970, it has been increasing. It is still a very small number, although the regional impacts are more sizable. New York and New England get about 12 percent of their electricity from Canada, so that is a more significant piece there.

Chairman BYRD. Where is that going for the most part?

Ms. BUCKLEY. To New England and to New York primarily. Some is also going to the Northwest.

Chairman BYRD. The Northwest being?

Ms. BUCKLEY. Into California by way of Washington State.

Chairman BYRD. You indicate in your budget justification that you will continue to monitor and analyze electricity import and export activities and publish an annual report on the exchanges that take place.

I noted that Hydro-Quebec told New England Power Pool officials that it will not be able to deliver power under interruptible contracts for 1 year beginning this September due to an extended draught in Northern Quebec, and unexpectedly high load growth in the Province.

To what extent would your marketing analysis focus on the reliability of these power imports?

Ms. BUCKLEY. Almost exclusively. We don't regulate imports of electricity because we don't have the authority, but we do regulate exports of electricity and we do regulate construction of transmission lines that cross the border.

And in both cases of exports and transmission lines, the criteria is reliability impact on the system, and that is what we look at.

We also look at imports to do these studies.

We wouldn't authorize anything that would adversely affect reliability and, in fact, we condition any orders we issue in a way to ensure that reliability is not adversely impacted.

Chairman BYRD. Could this loss of power supply cause a problem for New England electricity consumers?

Ms. BUCKLEY. We don't think so because there is duplicate capacity there.

The agreements were really made to import electricity from Canada for economic reasons, not because there isn't power available in New England, but because there was an opportunity to buy power that cost less from Canada.

So there is some redundancy in the availability of supplies.

Chairman BYRD. Are you doing anything to replace these power supplies in New England?

Ms. BUCKLEY. Not from a regulatory point of view other than the way we condition any orders we issue that approve permit of transmission lines. They are conditioned upon cooperation with the electric pools to ensure the reliability.

Chairman BYRD. In 1988, Canadian electricity imports dropped by 28 percent. The reasons given by the Canadian Electrical Association were increasing domestic demand and drought.

What does that say for reliability in the future?

Ms. BUCKLEY. It's not been an issue so far; in terms of construction of any additional transmission lines, they are permitted with the assumption that the electricity will not be available. And they are not permitted unless we can make sure that there are no reliability problems.

Chairman **Byrd**. New England is going to use 5 percent of their surplus power. There should be an issue there, wouldn't it?

Ms. **Buckley**. I don't——

MONITORING OF ELECTRICITY IMPORTS

Chairman **Byrd**. To what extent will your monitoring and analysis focus on the reliability of these power imports?

Ms. **Buckley**. As I said, we don't regulate electricity imports as a commodity. We do not judge the prudency of purchasing imported power compared to other power supply alternatives.

The extent that we have authority over construction of transmission lines that are used to import electricity reliability is the major criteria.

Chairman **Byrd**. It seems to me that you still haven't answered the question.

To what extent will your monitoring and analysis focus on the reliability of these power imports. You will be doing monitoring.

Ms. **Buckley**. Yes; and we do look at reliability. I'm sorry I did not understand the question.

Chairman **Byrd**. And your analysis would certainly focus on the reliability.

Ms. **Buckley**. Right.

Chairman **Byrd**. Would it not?

Ms. **Buckley**. Right.

BILATERAL DISCUSSIONS

Chairman **Byrd**. Of these power imports, your budget justification states that you will be providing technical and analytical support for bilateral discussions on electricity trade.

Would you elaborate on your role in these bilateral discussions?

Ms. **Buckley**. There is a semiannual formal meeting between the United States and the Canadian Government called the Energy Consultive Mechanism, sponsored by United States State Department and Department of Energy and the Canadian Office of External Affairs and Ministry of Energy, Mines, and Research, in which members of these organizations meet and discuss what is going on in the energy field between the two countries.

We provide analytical support to that semiannual meeting.

Chairman **Byrd**. I am concerned that we may be to some degree trading our dependence on insecure supplies of foreign oil for another troublesome dependence on foreign sources of electricity or natural gas.

Regional specialization theory aside, we should not be depending on others when we have plentiful coal and natural gas in this country.

Do you want to comment on that statement? Anyone?

Mr. **Wampler**. I think we constantly have to monitor this. I think that, stepping outside the role of ERA, one of the reasons that I was very pleased to see the fuels part transferred into fossil energy is because I think it is complementary. The electricity studies out of that office will tend to concentrate somewhat on the reliability, specific responsibilities under the law.

The rest of the office can certainly complement those with some longer-term strategic looks at energy in general. So I think they will be very complementary.

To answer your question specifically, I think we have to constantly look at this issue of supply. And we would intend to aggressively look at the issue of supply and certainly we would look at making sure that we don't get any more dependent on insecure sources than we are.

So we will constantly look into that problem.

FUELS CONVERSION PROGRAM

Chairman **Byrd**. On fuel conversions, how have the amendments to the Fuel Use Act that Congress approved in May 1987 affected the operations of the Fuels Conversion Program?

Ms. **Buckley**. It has substantially reduced the activity in the program that deals with fuels conversion. And at this point, the primary activity has to do with processing certifications in which a utility says that a new generating unit being constructed will be coal-capable in the future or alternate fuel-capable.

We have had no exemption requests filed from 1988 on to the prohibitions of the act; no utility has requested a prohibition order since then.

And, in fact, some have requested us to rescind their prohibition orders so they could have some flexibility to alternate gas use with coal use.

Chairman **Byrd**. How do you determine the adequacy of an applicant's coal capability self-certification?

Ms. **Buckley**. We basically look to see if they certify to the language of the act required. We don't even approve it, we simply announce that we have received it.

And if there are no comments, it is automatically approved. We have had no comments on any that we——

Chairman **Byrd**. You say there have been no exemptions to the coal capability requirement requested?

Ms. **Buckley**. None requested since 1987.

Chairman **Byrd**. And, of course, none approved.

What are the reasons most often presented by applicants in their requests for exemptions from the coal-capability requirements?

Ms. **Buckley**. Cogeneration and the cost test. The cost of burning coal is substantially more expensive than the cost of using oil or gas.

COST TO DECREASE FTE'S

Chairman **Byrd**. In fiscal year 1989, Mr. van Orman, you requested $250,000 to fund severance costs related to the decrease of 17 FTE's; for fiscal year 1990, you are requesting $500,000 to fund the cost related to the decrease of 20 FTE's.

Why does it cost twice as much to decrease an additional three FTE's?

Mr. **van Orman**. Mr. Chairman, the request for that amount of money is based upon the current situation in the two remaining field offices we have left, one in Houston and one in Dallas. And we anticipate making a decision this year as to whether we should continue those two field offices in operation.

Most of the function performed by those, the audit function, has been completed and the remaining functions are litigation support in nature. And that can be handled quite capably by the office in Washington.

Consequently, we will be looking at those two field offices with a view toward closing them, or consolidating them into a much smaller office.

We have 31 people in the office now, and we anticipate that probably one-half may be able to find suitable employment with the Department and other agencies and the increase in funding represents our best estimate as to what it will cost the Department in severence pay for the 15 or so employees who are not picked up.

The $250,000 request last year again was an estimate assuming that some action took place with respect to those offices. And it did not.

And I think this year we will take some actions.

ADDITIONAL COMMITTEE QUESTIONS

Chairman BYRD. All right, Mr. van Orman, the subcommittee and other Senators may have additional questions for you to respond to for the record.

Thank you very much for your testimony, and all of your associates.

Mr. VAN ORMAN. Thank you very much for your courtesy.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Objectives

Question: The objectives of the compliance program stated the FY 88, FY 89 and FY 90 justifications are to resolve at least one-third of the remaining cases and collect one-half of the remaining uncollected oil overcharge monies. The FY 88 justification indicated that there were 350 unresolved cases. The FY 89 justification indicated that there were 275 cases unresolved. The FY 90 justification states that ERA has about 200 cases remaining unresolved (pg. 453).

Is there a reason the program does not meet its objective?

Answer: The ERA, when preparing budget support documents, is always in the position of trying to anticipate events occurring some years in advance. This is not unusual in budget work. The ERA, however, is in a situation where many of our cases are in the control of forces outside the agency. These forces include Federal courts, the FERC, the OHA, bankruptcy courts and the contentiousness of the firms involved. Any given case in the ERA inventory can be settled by negotiation in a few weeks or be litigated to the Supreme Court over many years. The ERA provides a level of effort to complete cases on the estimated schedule.

The ERA had also hoped, perhaps optimistically, that because of our successes before the courts, more firms would entertain settlement discussions. Unfortunately, this has not proven to be correct.

The inventory of cases continues to decline, however, not at the pace we projected and would like to see. At the beginning of FY 1988, the ERA had 287 cases. At the beginning of FY 1989, we had 211. Currently, the ERA has 188 cases.

Question: Why not change the objective?

Answer: The ERA could change its objective but has generally taken a more optimistic position. _If_ the OHA and the FERC would complete several cases they have had for some time and _if_ the bankruptcy courts would make distribution on several cases and _if_ several firms in negotiation would settle, the ERA would more than meet its objective.

Settlements

Question: The Compliance program consists of litigating and negotiating settlements of cases previously developed. As time goes on, and the Department settles more cases, I would have assumed that you would negotiate more and litigate less. The number of cases negotiated, however, appears to be fairly stable at about 20 percent of the total.

At last year's hearing you thought that as the larger cases were settled, the other cases would fall into line.

Why isn't there more negotiation?

Answer: The ERA also thought that as more cases were won through litigation, more firms would be interested in possible settlement. Unfortunately, this has not been the case. Frankly, we are at a loss for an explanation. It should be made perfectly clear, however, that the ERA would like to settle as many cases as possible through negotiation and stands ready to enter into any reasonable settlement discussion.

The ERA currently has settlement negotiations on-going with about 21 firms. This number fluctuates rapidly and can be as high as 30 or as low as 15. Negotiations start and stop for a variety of reasons. During the past year, the ERA has entered into settlement negotiations for about $1.4 billion.

Collections

Question: Post litigation work includes monitoring compliance with 275 final orders and taking enforcement action as appropriate. In addition, you collect on approximately 100 delinquent escrow accounts.

Are there more or less delinquent accounts which were negotiated? Or can a comparison be made at all?

Answer: There are far fewer delinquencies on accounts which reached a negotiated settlement. Of all delinquent accounts, only about 17 percent are from cases that were the result of settlements and represents less than 4 percent of the total delinquent dollar amount. The likelihood of writing a case off is also much less for negotiated settlements.

Question: What actions are taken with delinquent accounts?

Answer: Cases requiring payment to the escrow account are monitored closely. When a firm or an individual misses a payment, contact is made to resolve the delinquency. If satisfactory arrangements cannot be made, the matter is referred to the Department of Justice for enforcement.

Question: At what point do you write them off altogether?

Answer: Cases are written off where we are unable to locate a party against whom to file suit, there are no assets to pursue, or the amount involved does not justify the cost of further pursuing the matter.

Severance Costs

Question: Can you elaborate on the 100 percent increase ($250,000 in FY 89, $500,000 in FY 90) in personnel severance costs in the Compliance program?

Answer: The 100 percent increase in personnel severance costs from FY 1989 to FY 1990 corresponds to a 100 percent increase (from 10 to 20 FTE's) in the number of personnel to be reduced in FY 1990. The funding request for severance costs is primarily a contingency in case the Department has to conduct a reduction-in-force (as opposed to attrition) to meet its FY 1990 target. The amount is based on the assumption that if 20 people have to be severed, half of them will find other Federal jobs, while the other half will be paid severance. Most of these will be eligible for severance pay equal to about one year's salary and benefits (about $50,000 each). Thus, the $500,000 figure is derived as follows:

1/2 x 20 FTE's x $50,000/FTE = $500,000

In addition to this benefit, those RIF'ed will also be entitled to a lump-sum payment for annual leave (about $6,000 to $8,000 each), and state unemployment (about $7,000 each) for which the Federal government must reimburse the States.

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Overcharge Compliance Activities

Question: Your FY 1990 budget request indicates that ERA will have only 150 overcharge cases left, as compared with 275 during FY 1988. Despite the 45% drop in the number of cases (and a 76% to 90% drop in anticipated overcharge "uncollections"), the ERA compliance budget and the Office of Hearings and Appeals budget requests are only down 10% and 1.5%, respectively, from FY 1988 levels. Please justify the lack of serious budget reductions at ERA and OHA.

Answer: The ERA has and will continue to reduce its number of cases, its staff and its budget. In 1981, the ERA had approximately 1,800 cases and a staff of 2,000. Today, we have 188 cases and a staff of 128. At one time, the ERA had approximately 135 field offices, today we have 2. The ERA believes there has, in fact, been serious budget reductions. The FY 1990 request provides for 120 FTE's for the Compliance program, a reduction of 20 FTE's or 14 percent.

While ERA's budget, which is primarily payroll, is based on the remaining caseload, it cannot be tied too closely. Government regulations and practical management precludes the ERA from reducing the concomitant staff whenever a case closes. Additionally, budget estimates are prepared months in advance. While it is the ERA's intention to reduce the number of cases stated in its budget submission, several factors can prevent this accomplishment. Many of ERA's cases are at the mercy of the schedules of various courts. We also plan on some number of negotiated settlements which may or may not happen. The ERA is hesitant to reduce its staff on "planned" case reductions.

The ERA assures the Appropriations Committee that it constantly analyzes resource requirements and will continue to reflect these results as accurately as possible in our budget requests.

OHA's budget request for FY 1990 was reduced by slightly over 5 percent from that authorized in FY 1989, even though OHA's workload has not diminished. Non-compliance cases, such as Freedom of Information Act appeals, continue to be received at historical rates. While there has been a decline in the number of new compliance cases received, a significant inventory (over 100 cases) remains to be worked off. Finally, and most importantly, OHA's refund application workload has increased substantially. In FY 1988, OHA received nearly 92,000 refund applications, six times as many as it received in FY 1987. Despite processing nearly 38,000 of these applications in FY 1988, a three-fold increase over FY 1987, a very large inventory (over 50,000) of applications remains to be worked off. In addition, OHA expects to receive up to 40,000 more refund applications by the end of FY 1990. This significant increase in OHA's refund application processing workload has more than made up for any reduction in its compliance case workload.

Question: What portion of the ERA request for $761,000 in program administration funding is represented by the compliance activities?

Answer: There is no accurate way to distribute the ERA program administration funding by specific activity. Out of the $761,000 comes the salary, travel and secretary for the Administrator and for the Office Director, as well as salaries for administrative personnel. While the ERA has reduced its staff as discussed above, it continues to require administrative services for the remaining staff. Also, during the course of these reductions, the ERA has combined numerous functions. Most employees paid from the program administration actually perform a multitude of other functions related to the compliance activity.

Question: What is the Department's position on taking compliance and refund activities out of ERA and OHA and placing them in other offices or departments?

Answer: Secretary Herrington considered several options with respect to his objective of continuing to complete the work and phase out the ERA program. Some options did include transferring the ERA functions to other organizations within DOE and to other agencies. None of these options were adopted, however. The Secretary did change the reporting of the ERA Administrator to him through the General Counsel. At this time, there are no plans being considered to further reorganize either the ERA or the OHA.

Question: How many compliance cases at ERA and OHA are there in which the Department is using the so-called "central figure theory" or a version thereof as part of its complaint? Please provide a list of the cases, with the amounts of alleged overcharges, interest and penalties asserted by the Department.

Answer: The Department has asserted tortious conduct (or the "central figure" theory) in 28 enforcement cases now pending at the Office of Hearings and Appeals, the Federal Energy Regulatory Commission, bankruptcy court, and federal district court. The following list shows the overcharges and interest of the cases in which tortious conduct has been asserted. No penalties are sought in any of these cases.

Individuals Subject To "Central Figure" Liability Charges in Pending DOE Enforcement Cases

Respondent(s) Asserted to be Central Figure	Corporate Respondent(s)	Principal Refund Amt. Sought From Corporation(s) 1/	Principal Refund Amt. Sought From Individual(s) 1/	Tribunal and Case No.	Amount of Interest on Individual Liability & Date Thru Which Interest Calculated 2/
Malcolm M. Turner 3/	Bayport Refining Co. 4/	$ 0 4/	$ 8,998,075 5/	OHA #HRO-0255	$ 10,878,763 6/86
James R. Blakemore	Beta Energy Corp.	3,604,583 6/	1,630,770 7/	FERC #RO86-26-000 (Blakemore) 84-01337 (Bankr. N.D. Okla.) (Beta)	933,759 8/82
Richard W. Johnson	Carbonit Houston, Inc.	8,112,022	8,112,022	OHA #KRO-0620	14,947,201 11/87

1/ The amounts in these 2 columns should not be added together. Where the refund amount for both corporate and individual respondents is the same, the asserted liability is joint and several. Where the refund amounts are different, the asserted liability is joint and several up to the refund amount sought from the individual respondents; the remainder is sought to be recovered from the corporate respondent(s) only.

2/ Interest on the entire violation amount was last calculated just prior to the commencement of enforcement action. In those cases in which the individual's principal refund amount is less than the corporate respondent's principal refund amount, the interest shown in this column is an approximation based on the original ratio of interest to principal.

3/ Two additional individual respondents are charged under a theory other than "central figure".

4/ Bayport was dissolved November 3, 1982.

5/ Per 2/16/89 Remedial Order Decision, OHA granted ERA's motion to reduce Turner's liability in accordance with the recommendations of the Central Figure Theory Review Group.

6/ DOE's proof of claim in the Beta bankruptcy proceeding totals $3,604,583 ($1,811,966 principal, plus interest of $1,792,617 calculated through 8/84).

7/ This figure reflects application of the Central Figure Theory Review Group recommendations, and was approved by FERC 12/8/88.

Respondent(s) Asserted to be Central Figure	Corporate Respondent(s)	Principal Refund Amt. Sought From Corporation(s)	Principal Refund Amt. Sought From Individual(s)	Tribunal and Case No.	Amount of Interest on Individual Liability & Date Thru Which Interest Calculated
Paul C. Elliott	Concord Petroleum Corp.	$ 3,019,224	$ 905,767 8/	OHA #KRO-0420	$ 1,268,828 9/86
Darryl Zang Louis Porter	Dalco Petroleum Corp.	8,084,787	8,084,787 8,084,787	82-00962 (Zang) 83-00716 (Porter) 83-01074 (Dalco) (Bankr. N.D. Okla.)	6,026,275 7/82 9/ 7,570,897 5/83 9/
Neal Davis	Elk Trading Co., Inc.	11,473,149	5,851,306 10/	FERC #RO88-8-000	16,941,140 3/89
Joseph A. Imperato	Houston Oil & Refining, Inc.	57,989,772	57,989,772	FERC #RO88-10-000	47,050,432 3/84
Larry D. Delpit 11/	Kern Oil & Refining Co.	25,242,016	6,310,504	OHA #KRO-0520	8,609,852 3/87
Michael L. Reed	Knox Oil of Texas, Inc.	360,986	360,986	FERC #RO86-4-001	232,367 12/83

8/ This figure reflects application of the Central Figure Theory Review Group recommendations. Action on ERA's motion to reduce the refund amount is pending decision by OHA.

9/ Per the Bankruptcy Code, interest is tolled as of the time of the filing of the bankruptcy.

10/ This figure reflects application of the Central Figure Theory Review Group recommendations. Action on ERA's motion to reduce the refund amount is pending decision by FERC.

11/ ERA has moved to withdraw its "central figure" charge against another individual, in accordance with the recommendations of the Central Figure Theory Review Group. With respect to a third individual, ERA has sought reconsideration of OHA's order denying ERA's withdrawal of its motion to join that individual on "central figure" grounds.

Respondent(s) Asserted to be Central Figure	Corporate Respondent(s)	Principal Refund Amt. Sought From Corporation(s)	Principal Refund Amt. Sought From Individual(s)	Tribunal and Case No.	Amount of Interest on Individual Liability & Date Thru Which Interest Calculated
John Mills	Lantern Petroleum Co.	$ 495,025	$ 165,009 12/	FERC #RO87-28-000	$ 300,635 12/87
Thomas H. Battle Anton E. Medune	Merit Petroleum, Inc.	48,290,793	16,418,870 13/ 2,897,448 13/	OHA #KRO-0530	23,479,381 9/86 4,143,420
William P. Boswell 14/	Mt. Airy Refining Co. 15/	0 15/	0 16/	OHA #KRO-0320	0 16/
Gregory P. Dillon 17/ Donald P. Lemoine	Nat'l Hydrocarbons Group, Inc. Nat'l Hydrocarbons Res. Corp. Nat'l Hydrocarbons Inc.	6,803,700	3,401,850 18/ 3,401,850 18/	FERC #RO87-24-000	1,993,484 12/82 1,993,484

12/ This figure reflects application of the Central Figure Theory Review Group recommendations, and was approved by FERC 12/19/88.

13/ This figure reflects application of the Central Figure Theory Review Group recommendations. Action on ERA's motion to reduce the refund amount is pending decision by OHA.

14/ Boswell, plus 5 additional individuals are charged with personal liability on a theory other than "central figure."

15/ Mt. Airy was dissolved 8/83.

16/ Per the Central Figure Theory Review Group recommendations, ERA has moved to withdraw "central figure" charges of $2,059,650 against Boswell.

17/ The Remedial Order is final and the enforcement proceeding terminated as to one additional individual who failed to prosecute his appeal to FERC of the OHA Remedial Order.

18/ This figure reflects application of the Central Figure Theory Review Group recommendations, and was approved by FERC 12/6/88.

Respondent(s) Asserted to be Central Figure	Corporate Respondent(s)	Principal Refund Amt. Sought From Corporation(s)	Principal Refund Amt. Sought From Individual(s)	Tribunal and Case No.	Amount of Interest on Individual Liability & Date Thru Which Interest Calculated
E.O. White	Osborne Energy Corp.	$ 925,102	$ 462,551 19/	FERC #RO86-16-000	$ 610,435 12/87
James C. Stevens 20/	Pel-Star Energy, Inc.	9,327,705	4,663,852 21/	FERC #RO87-19-000	7,539,664 12/87
A.V. Wright	Petroex Energy Corp. A.V. Wright & Assoc., Inc.	2,988,066 123,315	2,483,887	OHA #HRO-0236	2,413,545 3/84
Steven B. Wyatt	Phoenix Petroleum Co.	31,264,326	1,120,354 22/	FERC #RO89-3-000	1,140,520 9/85
Morris M. James T. Michael Howell C. Gregory Crafts	Port Petroleum, Inc.	6,049,613	786,450 23/ 786,450 23/ 786,450 23/	FERC #RO88-11-000	839,362 8/85 839,362 839,362
Morris M. James T. Michael Howell C. Gregory Crafts	Port Petroleum, Inc.	9,020,867	1,172,713 24/ 1,172,713 24/ 1,172,713 24/	OHA #KRO-0290	1,305,640 1/86 1,305,640 1,305,640

19/ This figure reflects application of the Central Figure Theory Review Group recommendations, and was approved by FERC 12/6/88.

20/ Another individual is charged under a theory other than "central figure".

21/ This figure reflects application of the Central Figure Theory Review Group recommendations. ERA's motion to reduce the refund amount is pending decision by FERC.

22/ Per 3/7/89 order, OHA denied ERA's motion to implement the recommendations of the Central Figure Theory Review Group as to Wyatt.

23/ This figure reflects application of the Central Figure Theory Review Group recommendations, and was approved by FERC 12/9/88.

24/ This figure reflects application of the Central Figure Theory Review Group recommendations. Action on ERA's motion to reduce the refund amount is pending decision by OHA.

Respondent(s) Asserted to be Central Figure	Corporate Respondent(s)	Principal Refund Amt. Sought From Corporation(s)	Principal Refund Amt. Sought From Individual(s)	Tribunal and Case No.	Amount of Interest on Individual Liability & Date Thru Which Interest Calculated
Richard E. Dobyns 25/	Revere Petroleum Corp. Corum Energy Corp.	$ 53,583,606 26/ 3,306,412 26/	$ 53,583,606	OHA #HRO-0125	$ 35,043,678 4/83
Ray V. Rodgers, Jr.	Rodgers Hydrocarbon Corp.	2,782,496	2,782,496	OHA #HRO-0298	3,000,166 3/85
Theodore M. Ragsdale	None 27/	0 27/	365,653	OHA #HRO-0270	340,953 11/84
William W. Scruggs Donald W. Guillory	Scruggs Energy Co.	13,302,314	13,302,314 11,820,000	S.D. Tex. H87-1315	16,969,504 3/87 15,011,400
Kenneth Walker	Southwestern States Marketing Corp.	26,548,783	28/	OHA #HRO-0258	28/
Ted R. Adkins	T&M Petroleum Corp.	1,904,046	1,904,046	FERC #RO87-14-000	1,112,337 9/82
James G. Allison, Jr.	T.E. Reserve Corp.	111,528,620	111,528,620	OHA #KRO-0400	76,017,422 12/85

25/ DOE entered into Consent Orders with 4 other individual respondents.

26/ These amounts are not cumulative.

27/ Salem Ventures, Inc., of which Ragsdale was the 100% shareholder during the violation period, had its corporate charter voided 3/1/84 for failure to pay franchise taxes.

28/ ERA has not completed its calculation of Walker's individual liability pursuant to the recommendations of the Central Figure Theory Review Group.

Respondent(s) Asserted to be Central Figure	Corporate Respondent(s)	Principal Refund Amt. Sought From Corporation(s)	Principal Refund Amt. Sought From Individual(s)	Tribunal and Case No.	Amount of Interest on Individual Liability & Date Thru Which Interest Calculated
William T. Tootle	Lotus Petroleum Corp. 29/	$ 7,008,666	$ 3,504,332 30/	FERC #RO86-24-000	$ 4,838,262 12/87
Iron R. Tootle	None 31/	0 31/	6,751,151	FERC #RO87-7-000	9,202,265 12/87

29/ The Remedial Order is final and the enforcement proceeding terminated as to Lotus (of which Wm. Tootle was a 50% shareholder), since firm took no appeal to FERC of the OHA Remedial Order.

30/ This figure reflects application of the Central Figure Theory Review Group recommendations, and was approved by FERC 12/8/88.

31/ Tootle Petroleum, Inc., of which Iron Tootle was the 100% shareholder, was dissolved 3/82.

OFFICE OF HEARINGS AND APPEALS

STATEMENT OF GEORGE B. BREZNAY, DIRECTOR

PREPARED STATEMENT

Chairman BYRD. Turning to the Office of Hearings and Appeals, Mr. Breznay will be speaking on behalf of the fiscal year 1990 budget request.

If you would proceed, Mr. Breznay, if you will have supporting witnesses, you may present them. And your statement you may put in the record in its entirety and you may wish to summarize it.

[The statement follows:]

STATEMENT OF GEORGE B. BREZNAY

Mr. Chairman, members of the Committee, I appreciate the opportunity to appear before you today to discuss the operations of the Office of Hearings and Appeals.

In 1988 we made considerable progress in all of our program areas. Most importantly, we continued our progress in the area known as Subpart V proceedings. These are proceedings in which we accept claims for refund of oil overcharge escrow moneys which have been received through Consent Orders or other enforcement actions. During fiscal year 1988 we processed 38,000 applications, an almost three-fold increase from fiscal year 1987, and distributed nearly $55 million in refunds to claimants. As of December 31, 1988, we have completed processing a total of 80,000 applications for refunds filed by individuals, large and small businesses in and outside of the oil industry, utilities, municipalities, housing authorities, and other government entities—virtually every segment of the public. In all, we have directed refunds to these claimants amounting to nearly $354 million. Our total disbursements of oil overcharge funds to date, which include the Warner amendment distribution, excess product moneys used for State energy conservation programs, and payments to the Federal Treasury, have surpassed $1 billion.

We also devoted significant time in fiscal year 1988 to other important program areas. For example, we have continued to actively adjudicate enforcement matters, with 77 separate cases concluded during the past fiscal year. Like most enforcement matters, these cases have all been vigorously contested—mainly because of the large sums of money at issue—and have involved complex legal and factual issues requiring detailed written opinions explaining our determinations. Our record in having these determinations sustained on appeal continues to be excellent. During fiscal year 1988 we reduced our inventory of open cases in the enforcement area by approximately 22 percent.

We also issued written determinations in 198 non-enforcement cases involving petitions related to the implementation of Subpart V procedures, Freedom of Information Act appeals, exception request and other matters. Inventory of open non-enforcement cases was reduced by approximately 26 percent.

During the period fiscal year 1988 through fiscal year 1990 we expect a significant increase in the number of refund applications we receive. In fiscal year 1988 nearly 92,000 refund applications were received. While the expected number of applications should decline during fiscal year 1989 and 1990, we expect to continue to process substantial numbers of these refund applications, as well as to resolve almost all of our remaining enforcement cases and the continuing flow of non-enforcement cases. This level of activity will reduce our inventory of open enforcement and other nonrefund cases at the end of each fiscal year.

Our fiscal year 1990 budget request of $5.2 million is $285,000 less than the appropriation for fiscal year 1989. This represents a ceiling of 74 full-time equivalents, a reduction of 15 FTE's from the staffing level approved by the Congress for fiscal year 1989.

This concludes my prepared statement. I would be happy to respond to any questions which you might have.

OPENING REMARKS

Mr. **Breznay**. Thank you, Mr. Chairman. I appreciate the opportunity to be here today.

I will say a few words and then will be happy to take any questions you might have. My office, the Office of Hearings and Appeals, is the adjudicator for the Department of Energy. We handle disputes involving the petroleum regulations, namely, the overcharge enforcement cases.

We also do appeals of Freedom of Information Act requests and other agencywide matters, and we are involved in processing applications for refund of all overcharge moneys.

The enforcement actions are brought before my office by the Economic Regulatory Administration, which acts as the prosecutor, and the respondent is usually represented by a battery of lawyers.

The cases that we have in the enforcement area now are relatively uncomplicated ones because they are at the end of the program. We have 57 remaining enforcement matters. The largest of these, incidentally, involves Salomon Brothers, which was mentioned earlier today. The amount at stake in that case is approximately $250 million. It is still in the briefing stage and we anticipate going through some discovery and evidentiary hearings.

Our fastest growing area is the applications for refund area. We have tens of thousands of cases in that area. I'm proud to say that, in the last fiscal year, we processed 38,000 individual refund cases, paying out approximately $55 million to claimants.

The best way to get a sense of what we are doing is to look at our caseload. And it continues to be sizable, particularly in the refund area. In the Freedom of Information Act and enforcement area, our workload is level or on a slight decline.

In the refund area, we have seen an expansion; with the phasing out of the enforcement program, the refund work has mushroomed.

So I don't want to give you the sense that the phasing out of ERA that Mr. van Orman talked about is having a similar effect in my shop. We are still extremely busy, and we have a large backlog of refund cases which will take some time to work through.

We have paid out over $1 billion through my office toward deficit reduction. Those payouts take place after we process the refund cases and pay the claimants. The remaining money goes either to the Federal Treasury or, ultimately, to the States for energy conservation programs.

Our request, finally, is for $5.2 million. That is sufficient to support a staff of 74 members, which is a moderate decrease from that which we received last year in the appropriation. We believe that given current workload levels, the requested staffing level is an adequate number.

I would be happy to take any questions you have.

REFUND CASELOAD

Chairman **Byrd**. The fiscal year 1990 request for the Office of Hearings and Appeals is $5,243,000, which is $285,000 below the fiscal year 1989 enacted level.

In August of last year, the backlog of refund applications was 64,000. What is the current backlog of refund cases?

Mr. **Breznay**. As of the end of January, our backlog was approximately 51,000 cases, Mr. Chairman, so we have come down from that 60,000 level. And I am happy to say, that I look forward to continued decreases.

Chairman **Byrd**. In your justification you informed me that you will have received 95,000 refund submissions in fiscal year 1988 and fiscal year 1989, and that you anticipate another 45,000 submissions in fiscal year 1990.

Are these estimates still accurate?

Mr. **Breznay**. Our projections have proven to be remarkably accurate, Mr. Chairman. There is a 3-year projection currently of 140,000 total refund cases for fiscal years 1988, 1989, and 1990 combined. And that one, which is similar to the projections we made in 1987 and 1988, is very likely to be correct. We are looking forward to an additional 45,000 cases by the end of fiscal year 1990, which would represent a total of nearly 200,000 refund cases in the aggregate.

Chairman **Byrd**. What is your estimate for resolved claims? You state in your budget justification that as of December 1, 1988, you had resolved over 46,000 claims in fiscal year 1988 and fiscal year 1989.

Now, what is your estimate for fiscal year 1989?

Mr. **Breznay**. It was 38,000 in the last fiscal year. Currently, we are running at about that rate of processing, and I look forward to an increase in that rate when we can pick up some temporary folks to do the easier cases. We are working off those easier cases pretty rapidly, Mr. Chairman, which leaves the inevitable residue of the hard nuts to crack toward the end.

So I don't think we will be able to keep up forever an annual rate of 38,000. I think we will be somewhere in the 20,000–30,000 rate of refund cases in fiscal year 1990.

Chairman **Byrd**. Given your estimate of claims resolved for fiscal year 1989 and fiscal year 1990, what is your estimate of the backlog of refund cases by the end of fiscal year 1990, not 1990?

Mr. **Breznay**. The math gets a little complicated, Mr. Chairman. I would like to make sure of it and give you that after I have a chance to look at the numbers.

I would expect that the backlog will come down somewhere in the range of 30,000 to 40,000 at the end of fiscal year 1990.

Fiscal Year 1990 Inventory of Refund Applications

OHA estimates that between 35,000 and 55,000 refund applications will remain in inventory at the end of fiscal year 1990. Where the actual number will fall within that range is dependent upon the amount of staffing resources available and the complexity and eventual size of future refund proceedings. Currently, there are 52,156 refund applications in OHA's inventory.

TRANSFERS TO THE TREASURY

Chairman BYRD. As of February 23 of this year, OHA indicated that $151 million has been deposited in the Treasury, $92 million in crude oil funds and $57.2 million in Petroleum Overcharge Distribution and Restitution Act funds.

What is your estimate for fiscal year 1990?

Mr. BREZNAY. The estimate, Mr. Chairman, depends on the rate at which cases are decided. Some of those are in court, some are at the Federal Energy Regulatory Commission, and some are with my office.

It also depends on the rate of settlement that ERA is able to negotiate. I really cannot, using my best efforts, give you any estimates of the number of deposits that is likely to occur in fiscal year 1990 in the crude oil area.

I can, however, in the area of product overcharges, which involves the Petroleum Overcharge Distribution and Restitution Act.

On March 1, we provided an estimate to you and to the other committees of $40.3 million in excess product money overcharges for fiscal year 1990. I expect that number will probably increase, but it is impossible to say by how much.

So, there will be a minimum of approximately $40 million, and I really can't give you the upside of that. It could go up another $40 million. It could go up even higher.

ENFORCEMENT CASELOAD

Chairman BYRD. In fiscal year 1987, the office concluded 157 separate enforcement cases, and you have indicated you were able to conclude 77 separate enforcement cases in fiscal year 1988.

Why has the number of completed enforcement cases dropped by over 50 percent?

Mr. BREZNAY. I think we are just working off our inventory, Mr. Chairman. We have 57 remaining cases. So, even if we work every weekend and every night, we couldn't show closures in the current fiscal year which approached that in fiscal year 1986 or fiscal year 1987.

I think it is a reflection of the fact that we just have fewer compliance-related matters.

Chairman BYRD. Do you have an estimate of the number of enforcement cases that will be completed in fiscal year 1989 and fiscal year 1990?

Mr. BREZNAY. We look forward to essentially working off nearly all of our inventory of enforcement cases by the end of fiscal year 1990.

So, of the 57 remaining, assuming we get no new matters and there are no court remands, I would expect that we would have an inventory of perhaps 10 remaining enforcement cases.

NONENFORCEMENT CASELOAD

Chairman BYRD. Between the end of fiscal year 1987 and the end of fiscal year 1988, the number of nonenforcement cases concluded dropped by almost one-third, from 294 cases concluded to 194 cases concluded.

What is the reason for the decline in the number of completed nonenforcement cases?

Mr. **Breznay**. Again, I think it reflects the fact that we have fewer cases of that type in inventory, Mr. Chairman. We continue to work off our existing noncompliance inventory. And in my opening statement, I noted that we reduced inventory by approximately 26 percent.

So, the backlog keeps going down. And although the absolute number of cases resolved is declining, I think we are continuing to reduce backlog at the same time.

Chairman **Byrd**. What do you estimate your backlog of nonenforcement cases will be by the end of fiscal year 1989 and fiscal year 1990?

Mr. **Breznay**. I would like to be able to provide that for the record, if I could, Mr. Chairman.

Chairman **Byrd**. All right.

And provide for the record an update of the table that you provided us last year which indicates the average case processing time for each case category and your projections for fiscal year 1989 and fiscal year 1990.

Mr. **Breznay**. All right, we will do that.

[The information follows:]

Fiscal Year 1989 and Fiscal Year 1990 Inventory of Non-Compliance Cases

OHA estimates that approximately 60 non-compliance cases will remain in inventory at the end of fiscal year 1989 and 50 cases at the end of fiscal year 1990. Currently, there are 99 non-compliance cases in OHA's inventory. However, OHA projects yearly receipts of approximately 175 to 225 non-compliance cases, so that the year-end inventory projection may vary with the timing of receipts.

AVERAGE CASE PROCESSING TIME FISCAL YEAR 1986–90

[Days]

Type of case	Fiscal year—				
	1986	1987	1988	1989 [1]	1990 (projection)
Compliance	484	648	532	521	521
Noncompliance	424	341	194	198	198
All nonrefund cases	453	448	288	282	282
Refunds	165	215	236	298	340
All cases	180	223	236	298	340

[1] As of March 10, 1989.

STAFFING LEVEL

Chairman **Byrd**. Congress appropriated an additional $600,000 for the Office of Hearings and Appeals in fiscal year 1989 to hire an additional 15 FTE's to enhance the ability of OHA to process in a timely manner the mounting backlog of refund applications.

How many are on board? How many FTE's?

Mr. **Breznay**. Currently, we are right at the ceiling of 89 FTE's, Mr. Chairman.

Chairman **Byrd**. Why does your fiscal year 1990 budget justification show a fiscal year 1989 estimate of 74 FTE's when Congress specifically added funding to your fiscal year 1989 budget to bring the OHA staffing level up to 89 FTE's?

Mr. BREZNAY. Does your question relate to fiscal year 1989, Mr. Chairman?

Chairman BYRD. Yes; why did your fiscal year 1990 budget justification show a fiscal year 1989 estimate of 74 FTE's when Congress specifically added funding to your 1989 budget to bring the staffing level up to 89 FTE's?

Mr. BREZNAY. That 74 FTE's is our OMB-approved ceiling for fiscal year 1989. You are correct, Mr. Chairman, that Congress appropriated more and I have assurances that we will be able to remain at a de facto ceiling of 89 FTE's for fiscal year 1989.

But the number that was passed back from OMB was the 74 number.

Chairman BYRD. So the OMB is imposing an employment ceiling?

Mr. BREZNAY. They have given a lower number. It is not affecting us currently because we are at 89.

Chairman BYRD. Has the Department imposed an employment ceiling?

Mr. BREZNAY. No; it has not. The 89 number is our correct ceiling, Mr. Chairman.

Chairman BYRD. And that is for how many FTE's?

Mr. BREZNAY. Eighty-nine FTE's, which is consistent with the congressionally appropriated level for fiscal year 1989.

Chairman BYRD. How many are actually on board?

Mr. BREZNAY. We do have the full contigent of 89 FTE's.

Chairman BYRD. Eighty-nine bodies on board.

Mr. BREZNAY. That's right.

Chairman BYRD. How many temporary employees do you have on board as of this date?

Mr. BREZNAY. We have approximately 10 temporary, other than full-time employees. Those are part-year appointments, in the nature of half-a-year.

Chairman BYRD. So you're up to your level of 89 FTE's now?

Mr. BREZNAY. That is right.

Chairman BYRD. And OMB says you should bring it down to what level?

Mr. BREZNAY. The OMB approved number is 74. However, the Department has told me informally that absent dramatic change, I can stay at the level of 89 for the remainder of the current fiscal year.

CASELOAD ESTIMATES

Chairman BYRD. You have previously indicated your estimates for refund enforcement and loan enforcement cases backlogs for fiscal year 1989 and fiscal year 1990.

How would these estimates have differed without the additional funding for additional staff provided by the Congress?

Mr. BREZNAY. There's no question that we would have a bigger backlog in each of the three areas. The most dramatic effect would be in the refund area, which is most susceptible to the additional resources.

Chairman BYRD. Do you have any estimates?

Mr. **Breznay**. I do not.

Chairman **Byrd**. In each of the three backlog areas?

Mr. **Breznay**. Mr. Chairman, I do not have any estimate. If you wish, I can go back and come up with a number for each of those areas.

[The information follows:]

CASELOAD PROCESSING RATES

REFUND APPLICATIONS

Because the type and size of refund applications and the extent of analysis required to resolve them can vary dramatically, any estimate of productivity—and therefore of final inventory—at different staffing levels is subject to considerable variation. During fiscal year 1988, with a staffing level of 84 FTE's, OHA resolved nearly 38,000 refund applications. Adjusted for the changes that would affect the professional staff at the 74 and 89 FTE staffing levels, in fiscal year 1988 OHA would have processed approximately 30,400 resolutions annually with 74 FTE's and 41,800 with 89 FTE's.

Based on current productivity rates and other resource considerations, OHA projects that it will process approximately 42,000 refund applications in fiscal year 1989 with 89 FTE's. Due to manpower configurations, a reduction of 15 FTE's to a staffing level of 74 FTE's, or 17 percent of total staff, would have exclusively affected OHA's professional staff, causing a reduction in analytical capability of at least 27 percent. Productivity in fiscal year 1989 would thus have fallen by at least 27 percent, limiting the processing of refund applications to approximately 30,500 cases instead of 42,000. Consequently, the projected year-end inventory for fiscal year 1989 would have been at least 11,500 cases larger if OHA had been staffed at the 74 FTE level.

After fiscal year 1989, however, as the open inventory of refund applications declines, processing rates too will almost certainly decline, even at current staffing levels. The very significant rates of case resolution achieved in fiscal year 1988 and fiscal year 1989 to date reflect, in large part, batch processing of relatively simple, similar applications. As the number of these cases falls, OHA's processing rates will likely decline even with unchanged funding and personnel.

COMPLIANCE AND NON-COMPLIANCE CASES

Fewer compliance and non-compliance cases are being completed because there are fewer of these cases and the remainder are among the most difficult of the proceedings OHA has conducted. However, we do not believe that the resolution of these proceedings would be expedited by additional personnel. These cases have been assigned to long-term, senior OHA personnel, whose experience and resources are moving these cases through as quickly as possible.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. All right, thank you.

The subcommittee and other individual Senators may have additional questions for you to respond for the record.

Mr. **Breznay**. Thank you.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

FY 1990 Personnel Level

Question: Why are you trying to push your FTE usage down in FY90--from the base level of 89 to 74--when the workload appears to be level?

Answer: The Department of Energy's budget requests for OHA for the 1989 and 1990 fiscal years were the same -- 74 FTE's in each year. However, in considering the FY 1989 appropriations bill, the Congress increased funding for OHA in order to support 89 FTE's during the 1989 fiscal year. Thus, the request for 74 FTE's for FY 1990 is unchanged from the Department's FY 1989 request.

Estimated Versus Actual Workload

Question: How have your workload estimates compared with actuals?

Answer: Our refund workload projections have proven to be quite accurate. In the FY 1988 justification, we projected that we would receive approximately 100,000 refund applications in FY 1987 and FY 1988 combined. OHA actually received 107,975 cases (16,007 in FY 1987 and 91,968 in FY 1988). The FY 1989 justification projected combined receipts of 100,000 cases in FY 1988 and FY 1989. As of February 28, 1989, with seven months remaining in the fiscal year, OHA has received 102,352 submissions in this period (91,968 in FY 1988 and 10,384 so far in FY 1989). Therefore, it appears that OHA will receive slightly more than the 100,000 cases it projected for FY 1988 and FY 1989 combined. The current FY 1990 justification projects receipts of as many as 140,000 applications for FY 1988, FY 1989 and FY 1990 combined. As of February 28, 1989, OHA's case receipts for this three-year period total 102,352. Recent experience indicates that the 140,000 case receipts projection may be slightly high.

Compliance Program Personnel

Question: Are any of the 15 FTEs allocated to the compliance program?

Answer: Each staff member works on all types of cases handled by OHA. Therefore, none of the 15 FTE's is specifically allocated to the compliance program.

Base Request Savings

Question: If so, wouldn't it save money in the long run to request the base level and provide the agency a better chance at resolving the remaining compliance problems?

Answer: The remaining compliance cases, in general, are open and outstanding because they are the most difficult of the agency's enforcement proceedings, not because of lack of personnel. In addition, all of these cases are assigned to experienced, competent personnel. Therefore, we do not believe that additional personnel would expedite this portion of OHA's caseload.

FY 1990 Excess Overcharge Funds

Question: Do you anticipate any additional PODRA funds will be available in FY90?

Answer: Our current estimate for FY 1990 is that $40.3 million in product oil overcharge funds will be "excess" under PODRA. However, that amount is expected to increase. A copy of our March 1, 1989 report to the Congress on PODRA, which contains a full explanation of the basis for the FY 1990 PODRA estimate, is included with this submission.

Department of Energy
Washington, DC 20585

Honorable Robert C. Byrd
Chairman, Subcommittee on
Interior and Related Agencies
Committee on Appropriations
United States Senate
Washington, DC 20510

MAR 1 1989

Dear Mr. Chairman:

Enclosed for the information of the Subcommittee is a copy of the report transmitted to the Senate Committee on Energy and Natural Resources which contains an estimate of "excess" oil overcharge funds that will be available for indirect restitution in FY 1990 pursuant to the Petroleum Overcharge Distribution and Restitution Act of 1986.

I hope this information is useful to the Subcommittee. Please do not hesitate to contact me if I may be of further assistance.

Sincerely,

George B. Breznay
Director
Office of Hearings and Appeals

Honorable J. Bennett Johnston
Chairman, Committee on
Energy and Natural Resources
United States Senate
Washington, DC 20510

MAR 1 1989

Dear Mr. Chairman:

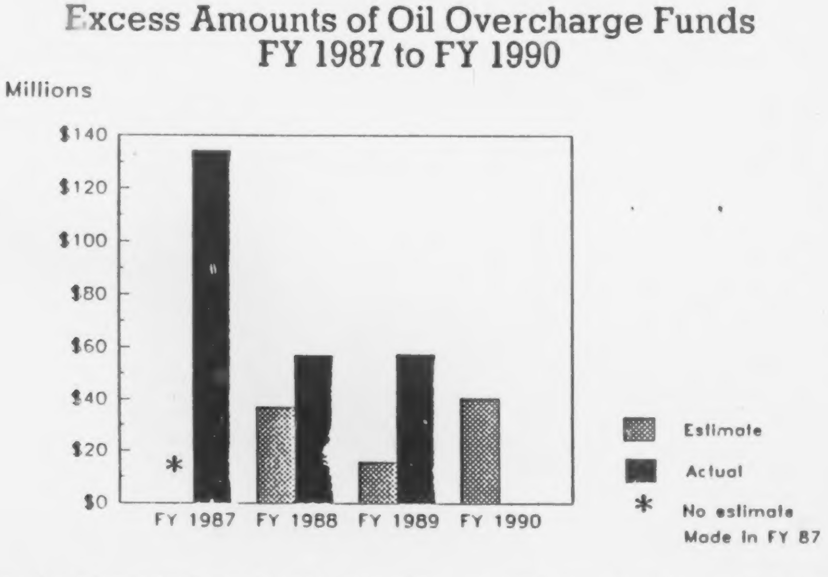
The Petroleum Overcharge Distribution and Restitution Act of 1986 (PODRA) requires the Secretary of Energy to transmit to the Congress each year on March 1, a report estimating the amount of escrowed oil overcharge funds that will be determined to be "in excess" of the amount needed for direct restitution for the next fiscal year beginning October 1. PODRA, section 3006(c). The Secretary has delegated the responsibility for that report to the Department's Office of Hearings and Appeals. This letter, and enclosure, serves as the required report for fiscal year 1990. Pursuant to section 3003(c) of PODRA, the final determination for FY 1990 will be made by November 15, 1989, after which those funds will be made available for four specified energy conservation programs.

The Office of Hearings and Appeals now estimates that a minimum of $40.3 million will be "excess" under section 3003(c) of PODRA for the next fiscal year. That number is likely to increase, but it is impossible at this time to say with any certainty by how much.

This estimate was obtained in the following manner, based on a case-by-case review of all DOE escrow accounts in which moneys covered by PODRA are deposited. Consistent with the statutory language which directs that "primary consideration [be given] to assuring that at all times sufficient funds (including a reasonable reserve) are set aside for making [direct] restitution," reserves have been established in each refund proceeding to fund completely all refund claims filed in that proceeding. We have also reserved amounts, as appropriate, in those proceedings where the claims period is not yet completed or where the claims period has only recently been completed (to allow sufficient funds for justifiably late claims). The results of our case-by-case review are shown in the enclosure to this letter. The foregoing process is consistent with the procedure followed in preparing the three previous final determinations issued under PODRA.

The amount of excess funds currently in escrow estimated to be available for FY 1990 in all cases subject to PODRA is $38,285,115.86. These escrowed funds are invested in an interest bearing account, and interest earned on the $38.3 million between February 1 and September 30, 1989, will increase the "excess" amount. At the interest rate of 8.12 percent per annum currently being earned, interest should increase the excess amount available by $2,072,500.94 to $40,357,616.80.

The following chart places the current estimate in historical perspective:


Excess Amounts of Oil Overcharge Funds
FY 1987 to FY 1990

I hope this information is useful to the Committee. Please let me know if I may be of further assistance.

Sincerely,

George B. Breznay
Director
Office of Hearings and Appeals

Estimate of Funds Available in Fiscal Year 1990 Under Petroleum Overcharge Distribution and Restitution Act of 1986

NAME	OHA CASE NUMBER	CONSENT ORDER NUMBER	JANUARY 31, 1989 PRODUCT EQUITY	ESTIMATE OF AMOUNT AVAILABLE IN FISCAL YEAR 1990
GULF OIL CORPORATION	DFF-0001	NOOR00007Y	$27,562,261.54	$27,562,261.54
MOBIL OIL CORPORATION	HEF-0508	RMOA00001Z	$4,710,510.07	$3,710,510.07
GETTY OIL COMPANY	HEF-0209	RGEA00001Z	$7,377,505.64	$2,500,000.00
WORLD OIL COMPANY	KEF-0005	960S00104Z	$2,324,377.65	$2,324,377.65
PRODUCT TRACKING - PODRA	None	999DOE005W	$447,013.08	$447,013.08
SAUVAGE GAS SERVICE CO,INC.	KEF-0024	710H06008Z	$484,088.22	$384,088.22
SUBURBAN PROPANE GAS CORP	KEF-0038	733V02010Z	$454,114.16	$364,114.00
PLAQUEMINES OIL SALES INC.	KEF-0039	640H00174Z	$512,180.13	$250,000.00
EASTERN OIL COMPANY	KEF-0085	412H00040Z	$144,322.49	$144,322.49
WINSTON REFINING COMPANY	HEF-0589	6D0S00006Z	$133,264.59	$133,264.59
POINT LANDING FUEL CO.	HEF-0152	640H00175Z	$131,946.26	$95,000.00
HOWARD OIL COMPANY	KEF-0008	240H00280Z	$88,198.65	$88,198.65
EVETT OIL CO	KEF-0020	400H00221Z	$75,940.72	$75,940.72
PETROLEUM HEAT & POWER	HEF-0150	110H00530Z	$103,717.08	$73,717.00
EARTH RESOURCES	HEF-0205	431S00341Z	$327,651.10	$60,676.00
CONOCO	HEF-0010	RCOA00001Y	$12,485.74	$12,485.74
SABER ENERGY, INC.	HEF-0220	6D0S00037Z	$11,795.64	$11,795.64
SOUTH HAMPTON REFINING	HEF-0222	6E0S00002Z	$10,334.69	$10,334.69
LEO'S-WINSTEAD'S	HEF-0114	710H01376Z	$8,579.20	$8,579.20
APCO OIL CORPORATION	HEF-0008	660S00632Y	$5,929.19	$5,929.19
BAK LTD.	HEF-0034	320H00043Z	$3,643.28	$3,643.28
SMITH, C.K. & CO.	HEF-0006	111H00028Z	$2,550.48	$2,550.48
UPG,INC	KEF-0026	641S00123Z	$2,047.41	$2,047.41
GOOD HOPE REFINERIES INC.	HEF-0211	150S00154Z	$1,555.27	$1,555.27
HOWELL-QUINTANA	HEF-0212	610S00068Z	$1,462.46	$1,462.46
THRIFTYMAN, INC	KEF-0018	610H10449Z	$1,379.28	$1,379.28
HUSKY OIL COMPANY	HEF-0213	820S00007Z	$1,289.36	$1,289.36
U.S.A. PETROLEUM CORP.	HEF-0500	960S00093Z	$1,124.52	$1,124.52
TENNECO OIL	BEF-0073	RTNA00001Y	$1,088.49	$1,088.49

NAME	OHA CASE NUMBER	CONSENT ORDER NUMBER	JANUARY 31, 1989 PRODUCT EQUITY	ESTIMATE OF AMOUNT AVAILABLE IN FISCAL YEAR 1990
GIBBS INDUSTRIES INC.	HEF-0079	110H00494Z	$595.69	$595.69
JAY OIL CO	HEF-0101	6C1H00209Z	$555.14	$555.14
RICHARDSON, SID	BEF-0022	6D0V00025Y	$435.76	$435.76
NORTHWEST PIPELINE	HEF-0264	710V03015Z	$399.15	$399.15
CRANSTON OIL SER CO INC	KEF-0029	111K00123Z	$391.48	$391.48
KNUTSON, MARLEN L.	HEF-0110	000H00422Z	$386.56	$386.56
KELLER OIL COMANY, INC.	HEF-0103	720H00598Z	$346.28	$346.28
NAVAJO REFINING CO.	HEF-0217	672S00136Z	$234.49	$234.49
CLEAN MACHINE, INC	KEF-0097	999K90079Z	$204.70	$204.70
QUAKER STATE OIL	HEF-0219	340S00352Z	$199.86	$199.86
KENT OIL & TRADING COMPANY	HEF-0578	940X00232Z	$199.47	$199.47
MARINE PETROLEUM CO.	HEF-0122	720H00567Z	$174.33	$174.33
ARKANSAS LOUISIANA GAS CO.	HEF-0201	641S00255Z	$153.77	$153.77
GCO MINERALS COMPANY	HEF-0570	NGCP00001Z	$137.56	$137.56
APPALACHIAN FLYING SERVICE	HEF-0028	432K00435Z	$133.05	$133.05
BUBBLE MACHINE	HEF-0514	999K90040Z	$109.06	$109.06
OCEANA TERMINAL CORP.	HEF-0142	240H00361Z	$104.19	$104.19
KING & KING ENTERPRISES, INC.	HEF-0108	710H02500Z	$102.99	$102.99
PERTA OIL	HEF-0148	930H00088Z	$101.04	$101.04
RICHARDSON AYRES JOBBER	HEF-0166	640H00354Z	$99.46	$99.46
QUARLES PETROLEUM	HEF-0158	N00H00905Z	$97.97	$97.97
PYROFAX GAS CORP	HEF-0157	641T00099Z	$82.02	$82.02
SIGMOR CORPORATION	HEF-0581	6D0S00091Z	$80.23	$80.23
ELM CITY FILLING STATIONS,INC	HEF-0067	150H00126Z	$76.34	$76.34
UNION TEXAS PETROLEUM CORP.	HEF-0009	6E0S00075Y	$72.82	$72.82
ONEOK INC	HEF-0571	740V01406Z	$72.16	$72.16
SWIFTY OIL COMPANY	HEF-0175	550H00337Z	$70.90	$70.90
GULL INDUSTRIES, INC.	HEF-0086	N00SD0001Z	$64.98	$64.98
LA GLORIA OIL AND GAS CO.	HEF-0210	641S00234Z	$64.72	$64.72
LEE GARRETT CHEVRON	KEF-0040	999K90057Z	$62.86	$62.86
CRYSTAL OIL CO.	HEF-0204	641S00098Z	$50.50	$50.50
BOX, CLOYCE K.	HEF-0041	600H00037Z	$40.93	$40.93
FARSTAD OIL COMPANY	HEF-0567	850H00018Z	$32.48	$32.48
LEWTEX OIL AND GAS CO	BEF-0033	6D0V00020Y	$29.38	$29.38
ALEMANY CHEVRON SERV CENTER	KEF-0023	999K90059Z	$28.87	$28.87
EASTERN OF NEW JERSEY	HEF-0065	240H00441Z	$28.16	$28.16

NAME	OHA CASE NUMBER	CONSENT ORDER NUMBER	JANUARY 31, 1989 PRODUCT EQUITY	ESTIMATE OF AMOUNT AVAILABLE IN FISCAL YEAR 1990
FERRELL COMPANIES, INC.	HEF-0587	710T00075Z	$27.27	$27.27
GARY ENERGY COMPANY	HEF-0245	810V00003Z	$26.09	$26.09
CAR WASH SERVICE	HEF-0516	999K90047Z	$23.36	$23.36
PRIDE REFINING, INC.	HEF-0218	6D0S00036Z	$21.13	$21.13
FRANKS PETROLEUM	HEF-0208	641S00421Z	$21.10	$21.10
INLAND USA, INC.	HEF-0096	720H00563Z	$20.35	$20.35
CONSUMER OIL CO.	HEF-0055	930H00097Z	$17.43	$17.43
TRESLER OIL COMPANY	KEF-0019	530H00449Z	$16.15	$16.15
SOUTHERN UNION	HEF-0223	673S00336Z	$15.20	$15.20
MCCLEARY OIL CO.	HEF-0127	310H00439Z	$14.47	$14.47
ARAPAHO PETROLEUM, INC.	HEF-0231	710V03019Z	$14.25	$14.25
CENTRAL OIL CO.	HEF-0047	110H00300Z	$14.07	$14.07
GULL INDUSTRIES, INC.	HEF-0085	010H00056Z	$13.75	$13.75
MAPCO INC.	HEF-0258	740V01246Z	$10.68	$10.68
ALLIED MATERIALS CORP & EXCEL	HEF-0200	660S00302Z	$10.64	$10.64
LUCIA LODGE	HEF-0119	910K00133Z	$10.21	$10.21
INMAN OIL CO.	HEF-0097	720H00557Z	$9.49	$9.49
PASCO PETROLEUM INC	HEF-0146	000H00442Z	$6.11	$6.11
MARTIN OIL SERVICE, INC.	HEF-0123	570H00200Z	$5.41	$5.41
ST. JAMES RESOURCES	HEF-0100	110H00487Z	$4.98	$4.98
LOWE OIL COMPANY	HEF-0118	710H01379Z	$4.12	$4.12
INDIAN OIL CO. INC.	HEF-0095	132H00243Z	$3.77	$3.77
DALCO PETROLEUM	HEF-0060	660T00642Z	$3.40	$3.40
ARKANSAS VALLEY PETROLEUM	HEF-0029	660H10655Z	$3.36	$3.36
GULL INDUSTRIES	HEF-0084	010H00357Z	$2.92	$2.92
EAGLE PETROLEUM	HEF-0243	710V03025Z	$2.87	$2.87
PARMAN OIL CORP.	HEF-0145	430H00219Z	$2.64	$2.64
WELLEN OIL CO	HEF-0584	240H00071Z	$2.42	$2.42
HICKS OIL & HICK GAS	HEF-0091	570E00128Z	$2.10	$2.10
TEXAS GAS & EXPLORATION	HEF-0274	6E0V00015Z	$2.01	$2.01
TIPPERARY OIL CO	HEF-0277	670V00323Z	$2.01	$2.01
ARKLA CHEMICAL CORP.	HEF-0030	641H00364Z	$1.72	$1.72
STINNES OIL	HEF-0174	240H00519Z	$1.25	$1.25
TARRICONE INC.	HEF-0177	240H00291Z	$1.23	$1.23
LEATHERS OIL CO.	HEF-0113	000H00426Z	$1.19	$1.19
LEWIS OIL CO.	HEF-0115	340H00493Z	$0.95	$0.95

NAME	OHA CASE NUMBER	CONSENT ORDER NUMBER	JANUARY 31, 1989 PRODUCT EQUITY	ESTIMATE OF AMOUNT AVAILABLE IN FISCAL YEAR 1990
PETROLEUM SALES/SERVICE	HEF-0151	340H00488Z	$0.95	$0.95
PROPANE GAS & APPLIANCE CO.	HEF-0156	420E00206Z	$0.88	$0.88
MISSOURI TERMINAL OIL CO.	HEF-0131	720H00562Z	$0.87	$0.87
MALCO INDUSTRIES	HEF-0121	530H00435Z	$0.78	$0.78
RAMOS OIL CO., INC.	HEF-0159	910H00144Z	$0.59	$0.59
BELCHER,LEONARD E. INCORP.	HEF-0586	151H00003Z	$0.54	$0.54
RESOURCES EXTRACTION	HEF-0574	740V01409Z	$0.48	$0.48
LITTLE AMERICA REFINING	HEF-0215	830S00012Z	$0.45	$0.45
LUKE BROTHERS INC.	HEF-0120	660E00075Z	$0.41	$0.41
PLATEAU INC	HEF-0272	733V02013Z	$0.41	$0.41
PORT OIL COMPANY	HEF-0153	420H00278Z	$0.41	$0.41
LAKES GAS CO INC	HEF-0112	510E00134Z	$0.13	$0.13
PETERSON PETROLEUM	HEF-0149	240H00491Z	$0.12	$0.12
EARLS BROADMOOR	HEF-0566	640Z00357Z	$0.07	$0.07
LOCKHEED AIR TERMINAL INC.	HEF-0117	930H00199Z	$0.06	$0.06
MCCLURE'S SERVICE STATION	HEF-0128	340H00486Z	$0.06	$0.06
POST PETROLEUM	HEF-0154	910H00145Z	$0.06	$0.06
STEVE'S EXXON & TOWING SER.	HEF-0550	999K90036Z	$0.06	$0.06
REYNOLDS OIL CO.	HEF-0164	810H00324Z	$0.05	$0.05
BUD'S EXXON SERVICE	HEF-0511	999K90038Z	$0.01	$0.01
AMINOIL U.S.A., INC.	HEF-0007	740V01259Y	$6,354,938.59	$0.00
AMTEL, INC.	HEF-0027	720H00552Z	$1,176,204.76	$0.00
ANCHOR GASOLINE CORPORATION	KEF-0120	740S01247Z	$4,824,017.20	$0.00
ATLANTIC RICHFIELD CO (ARCO)	HEF-0591	RARH00001Z	$42,586,229.03	$0.00
BEACON OIL. CO.	HEF-0203	910S00008Z	$2,462,298.32	$0.00
BUTLER FUEL CORPORATION	KEF-0094	110E00421Z	$56,320.13	$0.00
CENTURY REFINING CO.	BEF-0041	710V02006Y	$59,538.80	$0.00
CROWN CENT'L PETROL CORP	KEF-0044	RCWA00000Z	$6,939,392.84	$0.00
DORCHESTER GAS CORPORATION	HEF-0559	670S00113Z	$1,280,792.98	$0.00
EDGINGTON OIL COMPANY	KEF-0003	930S00173Z	$1,982,429.70	$0.00
ELIAS OIL COMPANY	KEF-0022	412H00105Z	$133,414.68	$0.00
EMPIRE GAS CORPORATION	KEF-0048	720T00521Z	$1,130,393.87	$0.00

NAME	OHA CASE NUMBER	CONSENT ORDER NUMBER	JANUARY 31, 1989 PRODUCT EQUITY	ESTIMATE OF AMOUNT AVAILABLE IN FISCAL YEAR 1990
ENRON CORPORATION	KEF-0116	730V00221Z	$49,574,249.68	$0.00
EXXON CORPORATION	KEF-0087	REXL00201Z	$22,576,415.19	$0.00
GULF OIL CORPORATION	HEF-0590	RGFA00001Z	$45,640,451.72	$0.00
INDIAN WELLS OIL COMPANY	KEF-0103	710V02002Z	$1,615,389.03	$0.00
KEY OIL COMPANY	HEF-0106	430H00477Z	$9,367.14	$0.00
MACMILLAN RING-FREE OIL CO.	HEF-0506	960S00053Z	$374,476.23	$0.00
MARATHON PETROLEUM CO	KEF-0021	RMNA00001Z	$6,531,024.35	$0.00
MARTINOIL COMPANY	HEF-0124	910T00120Z	$121,190.08	$0.00
MAXWELL OIL CO.	HEF-0125	000H00425W	$10,906.40	$0.00
MCCLURE OIL COMPANY	KEF-0009	660E00083Z	$45,653.15	$0.00
MURPHY OIL CORPORATION	KEF-0095	RMUH01983Z	$5,694,925.85	$0.00
NATIONAL PROPANE CORP.	HEF-0135	270T00002Z	$12,012.92	$0.00
NORTHEAST PETROLEUM CORP.	HEF-0137	120H00491Z	$366,953.04	$0.00
NORTHEAST PETROLEUM CORP.	HEF-0138	110H00334Z	$658,536.65	$0.00
O'CONNELL OIL CO.	HEF-0141	110H00513Z	$5,865.93	$0.00
PACER OIL CO	HEF-0143	412H00172Z	$19,985.75	$0.00
PEDERSEN OIL, INC.	HEF-0147	000H00418Z	$27,539.59	$0.00
PETROLANE-LOMITA GAS. CO.	HEF-0269	940V00195Z	$54,360.53	$0.00
PLACID OIL COMPANY	KEF-0007	6D0S00005Z	$2,016,223.54	$0.00
POWER PAK CO. INC.	HEF-0155	610H10452Z	$54,261.12	$0.00
POWER TEST PETROL DIST.	KEF-0042	240H00499Z	$483,525.32	$0.00
REINAUER PETROLEUM CO. INC	KEF-0110	240H00492Z	$321,438.55	$0.00
SHELL OIL COMPANY	KEF-0093	RSHA00001Z	$17,206,461.90	$0.00
TEXACO INC	KEF-0119	RTXE006A1Z	$92,438,591.53	$0.00
TOTAL PETROLEUM INC	KEF-0133	540S00227Z	$2,529,337.83	$0.00
TRUE OIL COMPANY	HEF-0557	733V02019Z	$1,825,266.40	$0.00
WITCO CHEMICAL CORP	HEF-0227	240S00054Z	$3,420,074.23	$0.00
TOTALS			$367,569,177.78	$38,285,115.86

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Portion of OHA Budget Related to Compliance

Question: What portion of the OHA budget request is related to compliance and related filings?

Answer: The bulk of OHA's budget consists of personnel-related expenses. All OHA staff members work on every type of case in the Office. Historically, no data has been kept on what percentage of each staff member's time is spent on each type of case. Therefore, the amount of OHA's budget that can be attributed to a particular type of case analysis cannot be accurately estimated. It would be accurate to say, however, that the bulk of OHA's resources are now being directed towards the resolution of its inventory of refund applications.

EMERGENCY PREPAREDNESS PROGRAMS

STATEMENT OF EDWARD V. BADOLATO, DEPUTY ASSISTANT SECRETARY FOR ENERGY EMERGENCIES

PREPARED STATEMENT

Chairman BYRD. The next item will be the Energy Emergency Preparedness Program. Testifying in support of the fiscal year 1990 budget request is Mr. Edward V. Badolato, the Deputy Assistant Secretary for Energy Emergencies.

The fiscal year 1990 budget request for the Office of Energy Emergencies is $6,641,000, which represents an increase of $487,000 over the fiscal year 1989 appropriations.

Your statement will be made a part of the record, and if you would like to summarize your statement and introduce any supporting witnesses, you may do so.

[The statement follows:]

STATEMENT OF EDWARD V. BADOLATO

Mr. Chairman and members of the Subcommittee, it is my pleasure to appear before you today in support of the President's budget proposal of $6.64 million for FY 1990 for the Office of Energy Emergencies.

The budget for the Office of Energy Emergencies is designed to support the national energy policy goal of fostering an adequate and secure supply of energy to the country at a reasonable cost. This means sufficient energy supplies to meet our short and long-term needs without undue dependence on insecure sources or on any single source of supply.

To help achieve this goal, the Energy Emergency Preparedness Program seeks to promote energy stability, security, and strength and thereby reduce the Nation's vulnerability to energy supply disruptions, and enhance our ability to minimize adverse consequences should a disruption occur.

The Program supports policies, programs and procedures for:

- ensuring that the Nation has sufficient energy supplies to meet defense and other vital national needs during peacetime and mobilization periods;
- responding to a full spectrum of energy emergencies encompassing oil, electricity, natural gas, and coal;
- drawing down and distributing the Strategic Petroleum Reserve (SPR);
- fulfilling commitments to the International Energy Agency (IEA), the North Atlantic Treaty Organization (NATO), and other allies;
- assuring Congress, States, localities, and the public of timely, accurate information, analyses and assessment about energy emergencies, both foreign and domestic, as it develops;
- coordinating Federal energy actions through the Federal Emergency Management Agency (FEMA) with States, localities and industry during a domestic energy emergency;
- ensuring that Federal energy emergency responses are based on the best possible assessment of the energy situation;
- ensuring response readiness through emergency planning activities, training and participation in civilian and military exercises; and
- ensuring the performance of the Department's essential functions in the event of war.

The Emergency Preparedness Program provides the Department with a cadre of trained professionals with institutional knowledge and experience in critical energy resources (e.g., petroleum, natural gas, electricity and coal), industry operations, market analysis, national security affairs, and crisis management. They are supported by integrated energy information systems and analytical tools, and in an energy emergency, this cadre can be augmented by other Departmental staff, interagency efforts, and experts drawn from industry.

FY 1989 ENERGY EMERGENCIES PROGRAM

During FY 1989, the Office of Energy Emergencies will continue to assess energy vulnerabilities and to develop policies and programs to address those of significant risk to the Nation's security. We will be examining policies and measures to reduce vulnerabilities, preempt emergency occurrences, mitigate impacts if they do occur, and restore normal operations. Among other activities, the office will:

o expand analyses of long-term energy issues that impact directly on energy emergency preparedness, the implications for U.S. energy security, and the adequacy of present Federal energy emergency policies and initiatives;

o refine the Department's Energy Emergency Management System structure and process based on the conduct and evaluation of DOE tests, exercises and simulations to ensure readiness of the energy emergency decision-making and response implementation process;

o support the NATO Wartime Oil Organization (NWOO) including recruitment and training of industry and government experts to fulfill NWOO functions; refine plans and procedures for operation of the NWOO-West at its wartime U.S. relocation site; support NATO civil emergency planning; participate in NATO petroleum logistics exercises; and perform analysis of U.S. petroleum supply and requirements for international emergencies;

o Participate in the International Energy Agency (IEA) including taking part in the recently conducted Sixth Allocation Systems Test; conducting evaluations and incorporating findings into energy emergency preparedness operating procedures; and providing government representation and technical support for policy and planning activities of the IEA Standing Committee on Emergency Questions;

o plan and conduct interagency civilian readiness, continuity of government, and other defense-related exercises and simulations to ensure the readiness of systems, procedures and staff for various energy emergencies; and initiate analysis of key issues that result from these efforts;

o monitor the energy situation and potential energy risks to provide early warning of potential emergency situations; and update and improve emergency response operating procedures;

o conduct technical energy studies of national security issues, including studies in response to National Security Council classified defense energy taskings;

o refine Defense Production Act (DPA) procedures to respond to Federal agency requests for energy resources during national security emergencies based on lessons learned from test and exercise program; define energy requirements for mobilization during a national defense emergency; and define program requirements and Departmental procedures for managing DPA activities during emergencies;

o improve data analysis capabilities with new or improved computer support tools (e.g., Decision Support System, Automated Office and Information System, expanded databases, microcomputer based communications network) in support of decisions in emerging and actual energy emergencies;

- o recruit and train new members of the National Defense Executive Reserve (NDER) who will augment DOE staff with industrial experts in a national emergency; integrate NDER's and DOE field elements into Continuity of Government sector teams; and develop operating procedures;
- o increase Continuity of Government readiness by developing special energy data bases; conducting staff training; participating in readiness exercises; maintaining support facilities; enhancing coordination links with States, DOE Regions and selected NDER's; and continuing to develop management support capabilities;
- o support the Interagency Group on Energy Vulnerability and the National Mobilization Interagency Group to promote national security emergency preparedness through civilian infrastructure vulnerability and requirements analysis, and emergency response policy development;
- o interact with government agencies, energy suppliers and users on energy supply vulnerability to determine vulnerability reduction measures needed by strategic energy systems for national security purposes, and to make their energy systems more resilient under attack and/or to mitigate the impacts of supply disruptions; and determine critical end-user minimum essential energy requirements and emergency backup capabilities; and
- o promote and participate in regional Federal/State energy emergency seminars; encourage regional State-to-State and Federal-State interaction on energy emergency planning; establish reliable and responsive communications and information links with States; and integrate State participation in DOE vulnerability assessment efforts, training programs, and emergency tests and exercises.

FY 1990 EMERGENCY PREPAREDNESS BUDGET REQUEST

The FY 1990 budget request for the Office of Energy Emergencies is $6.64 million, a $487,000 increase from the FY 1989 appropriation. A summary follows:

($ in thousands)

	FY 1989 Appropriation	FY 1990 Request
Emergency Planning	$ 501	$ 533
Emergency Operations	350	615
Program Direction	5,303	$ 5,493
Total	$ 6,154	$ 6,641

During FY 1990, we will continue to emphasize energy emergency preparedness activities both internationally and domestically. A variety of energy emergency preparedness tests and exercises, (e.g., Coordinated Emergency Response Measures) will allow us to assess our approach to emergency planning, operations and policy analysis, while identifying and assessing those areas that require new programs or procedures or priority attention by the Executive and Legislative branches of Government. We will continue to develop in-house expertise for planning, operations, and policy analysis and evaluation activities as the most effective strategy for accomplishing energy emergency objectives. This program maintains a relatively senior, experienced, and well-trained cadre of energy experts who can be quickly augmented by other personnel in an energy emergency.

We will be responsible for developing, implementing, testing and evaluating Departmental energy emergency preparedness policies, plans and operations (with the exception of nuclear-related accidents), including the effective use of resources such as the Strategic Petroleum Reserve and public information programs.

The Program will involve efforts to ensure U.S. capability to meet our international commitments to the IEA, NATO and other strategic allies. These efforts will include participation in IEA and NATO civil emergency preparedness activities such as the Coordinated Emergency Response Measures test and a training session for the NATO Wartime Oil Organization.

We will expand and integrate HQ's and field Continuity of Government structure with participants from DOE operations offices, laboratories, State, local and industry organizations. and support specialized equipment requirements. We will continue to enhance participants' capabilities to respond to Continuity of Government national security emergencies and refine standby policies, programs and procedures.

During periodic tests and exercises, we will obtain and interpret information on expected market operations to assess the impact of events on supply availability, the U.S. economy, trade policy and national security. Such assessments and other analyses will be prepared for actual emergency situations which may arise, and will be disseminated to States, local governments, and the general public as part of the Federal Government's emergency response program. Essential to these efforts will be the maintenance of various automated energy data systems.

We will integrate simulations, exercises and gaming into a framework focusing attention on energy emergency policy, strategy, and decision-making. This effort will concentrate on larger issues involved in energy emergencies as well as the important modeling techniques necessary to evaluate energy assumptions and projections.

We will examine the impacts of actual or prospective disruptions to energy systems (e.g., electric transmission lines, petroleum and natural gas distribution networks) and alternative responses to such disruptions. We will assess national security and other critical energy needs, and how to meet these needs and examine alternative ways to mitigate and respond to such threats. These activities will emphasize the identification, analysis, and systematic assessment of threats, both foreign and domestic, to our energy security. This will require close coordination with industry organizations, State governments and other elements within the Federal Government concerned with domestic and foreign threat assessments.

The Office will develop, implement, and enhance systems for ensuring the efficient operation of the Department's energy emergency response policies and programs prior to and during emergencies. We will conduct assessments of the national security and defense implications of energy emergency preparedness and response policies and programs through coordination with other U.S. agencies and participation in classified national defense tests and exercises. This will involve conducting technical studies and analyses in support of National Security Council mandated classified defense energy taskings to reduce U.S. vulnerability to disruptions from terrorist attack, sabotage, or other emergency events. A major objective is to ensure our ability to effectively use available energy supplies. These assessments will also consider use of the Defense Production Act in the event of a national defense emergency or military mobilization.

We will increase our cooperative efforts with industry to enhance national security emergency preparedness. These efforts will address specific changes in facilities, operational protocols, and working relationships with energy industry organizations such as the North American Electric Reliability Council and the National Petroleum Council.

We will continue to recruit additional members to the NDER program and integrate this program into the Federal Continuity of Government program. We will also develop DOE Orders on the use of NDER's in DOE programs for the management of energy resources in national security emergencies such as defense mobilization.

We will continue to support the Interagency Group on Energy Vulnerability (IG-EV), and provide support for other interagency efforts associated with national security emergency preparedness (e.g., National Mobilization). This involves providing a Secretariat to support the Chairmanship of the IG-EV, supporting staff membership, and the coordination of supporting studies for the subgroups.

We will continue a major effort to fine-tune and maintain the Energy Emergency Management System process to coordinate government preparation for, and response to, a wide range of potential energy emergencies. During FY 1990, activities will focus on the conduct of periodic exercises to test and refine other capabilities (e.g., incorporate energy emergency assessments, develop alternative response strategies, implement coordinated responses) and to improve our analytical and decision support systems.

We will continue to enhance the Program's data analysis capabilities through refinements to the Automated Office and Information System including the integration of data bases and modeling systems.

EMERGENCY PLANNING

The FY 1990 budget request for Emergency Planning is $533,000, a $32,000 increase from the FY 1989 appropriation. The request provides contract assistance to support the preparation, conduct and evalution of emergency preparedness tests, exercises and simulations (e.g., the second Coordinated Emergency Response Measures test, REX-ALPHA, NATO Wartime Oil Organization training). Through this activity emergency management processes will be developed and refined to augment in-house staff and provide assistance in conducting follow-up activities. Additionally, contract assistance will be used to support analysis of domestic energy security issues (e.g., vulnerability of U.S. energy systems, facilities and networks); support for IEA and NATO energy security analysis; and support for national security analyses for FEMA Special Compartmented Programs (these tasks are required by Presidential Directives and require major analytical efforts that involve modeling and simulation of defense energy requirements in the event of mobilization and other defense-related activities).

EMERGENCY OPERATIONS

The FY 1990 request for Emergency Operations is $615,000, a $265,000 increase from the FY 1989 appropriation. The request provides increased contract support to develop Continuity of Government national security emergency and testing of procedures and essential functions, support data services for modeling and impact analyses of classified scenarios or emerging threat conditions; special programming assistance in performing national security projects; maintaining electronic mail service to support exchange of information with State and local govern-ments, and DOE operations offices; and acquisition of commercial timesharing services, software and hardware upgrades, and information systems.

PROGRAM DIRECTION

The FY 1990 request for Program Direction is $5,493,000, a $190,000 increase from the FY 1989 appropriation. The request provides support for increased Continuity of Government program requirements including travel for regional training, meetings and exercises and for specialized equipment for management briefings, training and development; salaries and administrative overhead (e.g., rent) and telecommunications costs. The Energy Emergency Preparedness Program reimburses the Office of the Assistant Secretary for Management and Administration for these overhead costs. This budget request would maintain the Energy Emergency Preparedness Program at 71 FTE's.

This concludes my formal statement on our FY 1990 budget request. I will be pleased to answer any questions you may have.

OPENING REMARKS

Mr. BADOLATO. It is my pleasure to appear before you today. In terms of our budget proposal for fiscal year 1990, we have requested $6.64 million.

The Emergency Preparedness Program directs the Department's efforts to implement nonnuclear emergency preparedness strategies to meet our national priorities of energy stability, energy security, and energy strength.

We do this by assuring that our Nation has adequate supplies of energy at reasonable costs.

Today, the United States is better prepared than ever before to deter as well as to respond to any energy supply emergency arising from foreign oil disruptions or from domestic incidents that may affect our basic energy industries.

I am pleased to have this opportunity to describe some of our recent accomplishments in furthering our mission to strengthen our Nation's ability to effectively respond to energy emergencies.

For example, we have reassigned key staff; developed new emergency response organizations and procedures; revitalized our interaction with the energy industries; and developed a very close working and planning relationship with each of our States' energy organizations.

Mr. Chairman, this concludes my brief general statement and I am ready to respond to any questions you may have.

ENERGY SECURITY

Chairman **Byrd**. Given the steady increase in oil imports, 48 percent of which the Energy Information Administration estimates came from OPEC sources in 1988, what actions have you recommended that Secretary Watkins take to restore this Nation's energy security?

Mr. **Badolato**. Within the Department of Energy, we have worked to ensure our energy security. In view of increasing oil imports, we have worked first to ensure that we have strengthened the working of the free market to ensure the drawdown capability of the strategic petroleum reserve, where we now have 564 million barrels of oil located in the Gulf of Mexico.

We have also worked to ensure that we have a viable domestic oil industry, to diversify our sources of imported oil, to continue to conduct research and development on alternative sources of transportation fuels, to work on clean coal, and to ensure that we have enhanced oil recovery.

These are the types of actions that we have been recommending in our office in a broad, general sense, Mr. Chairman, to mitigate the potential effects from increased oil imports.

Chairman **Byrd**. Would you supply for the record a breakdown of the OPEC sources?

Mr. **Badolato**. Yes, sir; we will.

Chairman **Byrd**. And compare the 48 percent with each of the previous 5 years.

Mr. **Badolato**. Yes, sir; we will do that.

[The information follows:]

GROSS IMPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS FROM OPEC NATIONS 1984–88

Source	Daily average (in 1,000 barrels/day)					Percent of total imports				
	1984	1985	1986	1987	1988	1984	1985	1986	1987	1988
Arab OPEC:										
Algeria	323	187	271	295	294	5.9	3.7	4.4	4.4	4.1
Iraq	12	46	81	83	343	0.2	0.9	1.3	1.2	4.8
Kuwait	36	21	68	84	92	0.7	0.4	1.1	1.3	1.3
Libya	1	4	...	...	...	...	0.1	...	...	...
Neutral zone	10	...	...	...	9	0.2	...	...	...	0.1
Qatar	5	(1)	13	...	...	0.1	...	0.2	...	...
Saudi Arabia	325	168	685	751	1,062	6.0	3.3	11.0	11.3	14.8
U.A.E	117	45	44	61	28	2.1	0.9	0.7	0.9	0.4
Subtotal	829	471	1,162	1,274	1,828	15.2	9.3	18.7	19.1	25.5
Other OPEC:										
Ecuador	55	67	77	29	47	1.0	1.3	1.2	0.4	0.7
Gabon	58	52	26	35	16	1.1	1.0	0.4	0.5	0.2
Indonesia	343	314	318	285	190	6.3	6.2	5.1	4.3	2.6
Iran	10	27	19	98	(1)	0.2	0.5	0.3	1.5	...
Nigeria	216	293	440	535	568	4.0	5.8	7.1	8.0	7.9
Venezuela	548	605	793	804	779	10.1	12.0	12.7	12.0	10.9
Subtotal	1,230	1,358	1,673	1,786	1,600	22.7	26.8	26.8	26.7	22.3
Total OPEC	2,059	1.829	2,835	3.060	3,428	37.9	36.1	45.5	45.8	47.8

GROSS IMPORTS OF CRUDE OIL AND PETROLEUM PRODUCTS FROM OPEC NATIONS 1984-88—Continued

Source	Daily average (in 1,000 barrels/day)					Percent of total imports				
	1984	1985	1986	1987	1988	1984	1985	1986	1987	1988
Total gross imports	5,437	5,067	6,224	6,678	7,172					

[1] Less than 1,000 barrels per day.

Note: 1988 data are preliminary.

Source: Energy Information Administration: 1984—Petroleum Supply Annual, Table 15; 1985—Petroleum Supply Annual, Table 15; 1986—Petroleum Supply Annual, Table 15; 1987—Petroleum Supply Annual, Table 15; and 1988—Petroleum Supply Monthly, Dec. 1988, Table 19.

LIQUID FUELS CRISIS

Chairman BYRD. In the event of a major liquid fuels crisis, what options would you recommend the Secretary take?

Mr. BADOLATO. If we had a liquid fuels crisis, one of the first response mechanisms, in fact, the major response mechanism which we have in the Department of Energy and in our country, is the drawdown of the strategic petroleum reserve.

Second, we would recommend that we look at our secure, reliable sources of imported oil.

Third, we would use those mechanisms which we have available to us in times of emergency, such as the Federal Energy Management Program.

Other activities include working with the States to encourage reduced fuel consumption, and possibly ease some environmental restrictions so that we can use fuel switching very effectively.

These are the types of things that we would do, Mr. Chairman.

Chairman BYRD. How long would the SPR oil last, assumed it was filled to capacity, 750 million barrels?

Mr. BADOLATO. Let me first discuss what we have at present. At present, we have the capacity to draw it down at the initial rate of 3.2 million barrels of oil per day for a period of 120 days, with a slightly lower amount averaging 2.3 million barrels per day for a month, and then stepping down the rate as we continue to decrease volume in the caverns.

It would be essentially the same rate when we get to the 750 million barrels. At that level, we would have increased physical capability to drawdown at an initial rate of 4.5 million barrels per day for 120 days, to put 4.5 million barrels of oil in the market, and then a slightly lesser rate until we completely withdrew the 750 million barrels.

INTERNATIONAL ENERGY AGENCY

Chairman BYRD. To what extent do our obligations to the International Energy Agency require us to share our SPR oil?

Mr. BADOLATO. Belonging to the International Energy Agency has been a benefit to us for the purpose of developing the cooperative drawdown process and emergency sharing system.

The strategic petroleum reserve has been part of the U.S. strategy in tactics in working with the IEA. To share and to ship our

SPR oil overseas has not been what we have seen in our large-scale tests that we have done with the IEA.

In these tests, our reserve has been used internally in the United States and has not been required to be shared or shipped overseas as part of the emergency sharing system.

As a matter of fact, as we go through that program during a severe international energy emergency, it has been our experience, through several large-scale global tests of the sharing system, that the United States is a recipient of oil rather than an exporter of oil overseas.

Chairman BYRD. Given the steady increase in oil imports over the last 2 or 3 years, would you describe the adjustments and changes you had made to your emergency preparedness strategies and planning?

Mr. BADOLATO. As you have said, Mr. Chairman, the global oil market as well as the industry are fairly dynamic. There have been big changes in the market as well as the industry. We have tried to respond to this through increasing our planning and operations activities. For example, we have created inside the Department an energy emergency management system that has as its heart a team of experts representing all eight Assistant Secretaries within the Department, plus technical advisors, to respond very rapidly with a departmental position to the Secretary, and then to the President on what should be done.

Second, in an intergovernmental sense, we created 2 years ago the interagency group on energy vulnerability, which gives us the same capability among various departments and agencies to respond to an energy emergency.

Internally, we have conducted numerous studies in an effort to stay ahead of the energy emergency decision curve. We have looked at such things as the availability of shipping, and how our SPR can figure into not only the use of new market mechanisms such as the spot market, but the futures market and their impacts.

In addition, you will see in the proposal that we are working on an automated office and information system which integrates a decision support system where we can treat and work with large amounts of data in the energy area and use that effectively in our energy emergency response mechanisms.

RESERVES OF OTHER NATIONS

Chairman BYRD. How many IEA member countries are either net exporters of oil or maintain their own strategic reserves?

Mr. BADOLATO. The latest IEA figures indicate that there are essentially four countries that have what we call serious strategic reserves.

The major ones are, first, Germany, which has 185 million barrels of government-controlled strategic oil reserves. Next comes Japan with 169 million barrels, then The Netherlands with 13 million barrels, and, finally, Denmark with 14 million barrels.

This, together with our strategic petroleum reserve, will give us nearly 1 billion barrels of Government-controlled stocks. This is a long way from the situation we found ourselves in back in 1979.

IEA'S DRAWDOWN PLAN

Chairman **Byrd**. How does IEA's coordinated drawdown plan work?

Mr. **Badolato**. The coordinated drawdown, or as we have termed it working within the IEA, the coordinated emergency response measures, or CERM is a first line of defense in an international energy disruption.

In this instance, when there is a likelihood that there will be an oil disruption but not at the serious triggering level that we have seen in the past—and, incidentally, the triggering level that should be discussed is 7 percent—each country will unilaterally move to look at its own stocks and its own actions in compliance with the IEA efforts and the CERM procedures that we have outlined.

For example, we would consider drawing down our SPR stocks to be used in the United States. Likewise, Germany, and Japan would be doing the same thing. Other countries which do not have the large strategic stocks would most likely be using demand restraint to be able to help their internal situation.

A coordinated emergency response measures test was conducted last January and we think we are on the right track to having a first line of defense that will allow us to cope with a nontriggering level emergency.

IEA MEMBERSHIP

Chairman **Byrd**. What countries make up the IEA?

Mr. **Badolato**. Twenty-one countries. The industrialized countries, mainly from the West. They are in the OECD for the most part.

DRAWDOWN CAPABILITY OF OTHER NATIONS

Chairman **Byrd**. When you consider the reserves of Germany and the other countries that you mentioned a moment ago, Japan, how do you feel that their ability to drawdown as compared with ours—how do they compare?

Mr. **Badolato**. Well, Mr. Chairman——

Chairman **Byrd**. And as for the sufficiency of the reserve, over what period of time would the reserves of the other countries carry them?

Mr. **Badolato**. Well, by rough formula, their reserves essentially give them 90 days of stocks under Government control. I would have to say with a little bit of pride, about the strategic petroleum reserve that we have created, our reserves have been well-engineered, tested, and well-run. We think we know how to really run the strategic petroleum reserves correctly. We think it is a great insurance policy for the country if we ever experience a disruption again.

As far as Japan is concerned, we have had numerous visits from the Japanese to see exactly how we turn the valves and other operational aspects. We also share other information with them through my staff, who have responsibility for recommending drawdown and distribution policy decisions.

We have worked closely with the Japanese. Just 2 weeks ago, I was in London in a NATO exercise where we worked with the Germans, the Dutch, and the Danes on how they would be drawing down their strategic stocks.

I do not want to vouch completely for them. I know they are looking at it. I think ours is first class and I think that we are teaching them a lot in how to do this.

Chairman **Byrd**. Proportionately, do you think that the reserves in Germany and Japan and the other countries have on hand—compare well with ours? Better? Or, less well?

Mr. **Badolato**. Proportionately, their reserves are less. Our SPR has been going for 10 years and we have been gaining in this field since 1982. With that in mind, Germany and Japan have only been building for several years. They have shown through their process and their funding and purchasing of oil that they are serious about building it up to have adequate stocks.

UNRESOLVED SPR ISSUES

Chairman **Byrd**. On page 418 of the budget justification, you identify several major strategic petroleum reserve issues that need to be resolved. "Such as the need for an IEA negotiation strategy and the implications of less than maximum drawdown."

Why are these considered major unresolved SPR issues?

Mr. **Badolato**. Mr. Chairman, we have to be assured as we get involved in a crisis and in consultations at Paris at the IEA headquarters, that we clearly understand the impact of our SPR as we begin to work with other countries, and in working with them and in negotiation, how the international oil market will be handled.

Additionally, we think that the SPR, though it can be drawn down on a maximum level, presently 3.2 million barrels a day and gradually increasing. We think we have to understand the implications of drawing it down less, for example, 500,000 barrels a day to 1 million or 2 million. We feel we really need to study this and understand the implications not only for putting the oil on the market, but also the implications of the mix and the drawdown, where it will come out and where it will go.

INTERNATIONAL COMMITMENTS

Chairman **Byrd**. You refer to efforts to ensure U.S. capability to meet our international commitments, the IEA, NATO, and other strategic allies.

What are our commitments?

Mr. **Badolato**. Our commitments are to participate in the IEA and to participate in the international energy plan which sets forth the emergency sharing system.

Specifically, our commitments to the IEA involve several aspects. No. 1, if it would involve the fact that there is potential oil sharing, and as I said, all of our exercises and our analysis has shown that we have not had to ship any U.S. oil overseas, it is probably very likely that we won't have to put our oil on the international market. Generally speaking, our SPR allows us to do without imports. We use our SPR so that oil that would ordinarily be tankered into the United States would be picked up by the international market.

In the area of NATO, we belong to the NATO Wartime Oil Organization. Our Department represents the Government there where we have the responsibility to ensure that we in the Western Hemisphere are prepared to support our NATO allies.

We have a number of oil industry experts in the joint operational staff. We have a total of 37. We had 22 Americans and 10 Canadians and 4 from other countries involved. These are industry operating managers—vice presidents and people of that nature—that help us develop an oil strategy for keeping NATO supplied both militarily and in a civilian sense with petroleum products and oil during times of crisis and war.

Chairman **Byrd**. Does the reference to, quote, "other strategic allies," refer to bilateral commitments that had been entered into outside of the IEA and NATO?

Mr. **Badolato**. Yes, sir.

Chairman **Byrd**. And what are those?

Mr. **Badolato**. Our commitments to help Israel, for example, is one that comes immediately to mind. We have some. Rather than go down the list, some of which are small, I would request your permission to give you that in the record for completeness.

[The information follows:]

Strategic Energy Commitments of the United States

In addition to IEA and NATO energy emergency commitments, the United States also has agreements with Israel and South Korea to assist them in an energy crisis. The 1979 Memorandum of Agreement with Israel makes provision for the United States to provide oil for Israel if its normal requirements cannot be met. If U.S. supplies are also constrained, the United States will sell oil to Israel in accordance with the same sharing formula used by the IEA.

The United States-South Korean Joint Petroleum Agreement of 1964 provides for Korean petroleum assistance to U.S. forces in Korea, and Korean access to those reserves in an emergency so long as combat readiness is not hampered.

Due to the economic interdependence of free world industrialized countries whose economies are petroleum dependent, these agreements are designed to ensure allied cooperation in an energy crisis, based on the countries' mutual interest.

USE OF SPR OIL FOR NATO

Chairman **Byrd**. Would SPR oil be used for NATO?

Mr. **Badolato**. Drawing on our experience from various types of exercises, for example, the very global NATO exercises, we have not used SPR oil.

However, if we are at the brink of disaster—and I must say to you if we are on the brink of disaster supplywise with NATO and our allies, it is not SPR crude oil that will be used for NATO, per se. Rather, we may see the SPR oil being turned into product down in our Houston refineries, and the gasoline fuel refined from the SPR oil would go to support our European allies.

That is a possibility. But we have not seen that in the exercises that have been done on an annual basis.

DOD USE OF SPR

Chairman **Byrd**. Does the Department of Defense have first call on SPR?

Mr. **Badolato**. The Department of Defense does not have first call on SPR, per se. Let me clarify that. It is a policy of the Government, and I think that President Bush would most assuredly carry this out, that defense requirements will be met, period.

With that in mind, we will ensure that all defense requirements will be taken care of. It must be considered that the Department of Defense does not use crude, they use product—gasoline, diesel fuel, and aviation fuel.

With this in mind, the Secretary has the discretionary ability to allocate 10 percent of any monthly drawdown to the Department of Defense, if that is required.

We think that this will probably allow us to take care of defense needs insofar as providing increased time. In fact, during peacetime, defense required only about 3 to 5 percent of our total energy needs, which allows us 97 to 95 percent for our total energy fuel requirements to be used to take up that slack with the Department of Defense.

SPR DRAWDOWN DECISION

Chairman **Byrd**. How would a decision be made to drawdown the oil from the SPR and who would make the decision?

Mr. **Badolato**. That decision would be made by the President on recommendation of the Secretary of Energy. Our energy emergency management team is monitoring potential problems around the world, and our oil demand and supply situations. If we had a very serious situation, even more serious than happened in the past in the Persian Gulf, this team would meet to evaluate the problem, and prepare a situation analysis which essentially would tell the Secretary how bad the situation is and recommend a course of action.

So as far as the mechanics are concerned, such as what the impact of the drawdown would be on the economy, GNP, unemployment, for example, the Secretary would take the situation analysis report and a formal plan that would prepare him for briefing the President.

The President then would make a decision whether to drawdown the SPR. That authority is vested in him through EPCA and it provides him with that authority to drawdown the SPR.

Chairman **Byrd**. What rate could it be drawn down today?

Mr. **Badolato**. If we turned it on today, it would be 3.2 million barrels.

Chairman **Byrd**. And the maximum drawdown rate?

Mr. **Badolato**. That is the maximum. When we get to the 750 million barrels, we will be improving our throughput ability with pipelines and dock capability, and we expect to go to 4.5 million barrels a day.

SPR DISTRIBUTION PLAN

Chairman **Byrd**. Would you rely exclusively on market instrumentalities to distribute oil from the SPR?

Mr. **Badolato**. We in the Federal Government would, Mr. Chairman. We have worked very hard on this with industry and nearly every State in the Union and territories, looking at how the SPR would be distributed, and where it would go.

We feel that the fundamental patterns of the industry would get that oil to the refineries and thereafter the products to where they should be.

Now, in working with the States there is an important area which we applaud and that is the States set-aside program. This program gives the Governors of each State the authority to set aside 2 to 5 percent of that oil for their critical users, such as farmers, hospitals, police departments, and others.

We would work very closely with each State in developing its energy emergency plan to ensure that they have a viable set-aside program.

NPR SALE

Chairman BYRD. Was the Office of Energy Emergencies consulted regarding the administration's proposal to integrate the sale of the naval petroleum reserve with the effort to maintain a 72,000 barrel per day SPR fill rate?

Mr. BADOLATO. Mr. Chairman, we participate in those deliberations inside the Department. Our staff works with the policy staff in fossil energy, in that decision.

In short to answer your question, I would have to say yes.

Chairman BYRD. Were you solicited on the proposal to create a 10 million barrel defense petroleum inventory?

Mr. BADOLATO. Yes, sir.

Chairman BYRD. Are you participating in the Department's study of the feasibility of expanding the SPR to 1 billion barrels?

Mr. BADOLATO. Yes, sir; we are.

SPR FILL RATE

Chairman BYRD. The administration is requesting an appropriation in 1990 which would provide for a SPR fill rate of 22,000 per day. Do you think that this is sufficient to meet our energy security needs?

Mr. BADOLATO. If I could answer this question by saying, as stewards of energy emergency preparedness, I would have to say I don't think this is sufficient.

But, in view of the deficit and other situations that are taken into consideration, such as the linkage with the naval petroleum reserve, I would have to say that it looks as if it is a fairly viable alternative.

Chairman BYRD. Let's stay with the situation. Aside from the budget considerations, do you think that the 22,000 per day is sufficient to meet our energy and security needs?

Mr. BADOLATO. Mr. Chairman, as our imports are scheduled to increase, the fill rate of the strategic petroleum reserve at a very modest rate would mean that we would have to work very hard to achieve our matching of 90 days of imports and stay ahead of the curve.

Chairman BYRD. So the answer is no then to my question?

Mr. BADOLATO. If it is purely taken in that sense, without taking anything into consideration, the budget, or if it's just from a national security standpoint, an energy standpoint, I would have to say you are correct, sir.

EXTENDED LIQUID FUELS CRISIS

Chairman BYRD. In the event of a prolonged liquid fuels crisis, is it possible to maintain this energy policy goal without some kind of contingency allocation plan? It would foster a reasonable supply of energy to the country.

Mr. BADOLATO. We feel that in a long-term sense, Mr. Chairman, we would be working very hard to maintain the free market. However, in a prolonged effort, we have some authorities, particularly for a national defense situation.

Specifically, we have the Defense Production Act, which allows us to ensure that our defense industries and the military have adequate types of supplies.

CONTINGENCY ALLOCATION PLAN

Chairman BYRD. You don't have a contingency allocation plan, do you?

Mr. BADOLATO. No, sir; we do not.

Chairman BYRD. Do you think it is possible to maintain that energy policy goal which I just stated without some kind of contingency allocation plan?

Mr. BADOLATO. Yes, sir; I do.

Chairman BYRD. Why not have a contingency allocation plan?

Mr. BADOLATO. The contingency allocation plan, Mr. Chairman, would provide us with the listing of literally hundreds of plans to work with, scenarios which are almost unlimited in their number and scope.

Rather than do that, we would like to continue with the free market and see where we can remove those impediments from the free market and work with existing procedures.

Chairman BYRD. Without a contingency plan, wouldn't it work a hardship on those who are least able to pay for oil? The poor?

Mr. BADOLATO. To be very honest with you, sir, from working with the States and their cities and the local authorities I would have to say from my experience that, yes, it would most likely provide some hardship.

But it appears that those State and local authorities have social programs and funding programs available. There are also other types of fiscal relief programs that would be provided to the poor and those least likely to pay for these increases.

Chairman BYRD. There may be fiscal programs but if there isn't the oil to allocate, what good does the fiscal program do?

Mr. BADOLATO. We will have the oil, Mr. Chairman, and in those local areas where we could develop problems, we have encouraged the States to include a set-aside program.

NATIONAL DEFENSE EXECUTIVE RESERVE

Chairman BYRD. What is the National Defense Executive Reserve?

Mr. **Badolato**. It is a governmental organization which has been organized under the Defense Production Act to provide those skilled individuals from industry to help the Government in times of national security emergencies.

With this in mind, we have within the Department a number of these individuals we use in the oil, natural gas, electricity, and coal areas.

Chairman **Byrd**. What is the current strength of the reserve?

Mr. **Badolato**. At the present time, our total reserve stands at 200. This means they have their security clearances and they are working for us now. We would like to increase this considerably and move this up to the maximum level of 400.

DPA AUTHORITIES

Chairman **Byrd**. On page 425 of the budget justification, you describe a program that calls for developing DOE orders for contingency crude allocation of DPA authorities to National Defense Executive Reserve regional managers or survivors effective only during communications cutoff conditions.

Would you describe the DPA authorities which would be predelegated?

Mr. **Badolato**. These authorities refer to the Continuity of Government Program, which involves a situation where our Nation has suffered a tremendously severe emergency and requires drastic measures to ensure that our essential Government services continue.

With this in mind, we can see that when we have lost contact with Washington and with the regions, it would be important to provide our National Defense Executive Reserve along with the surviving senior Federal entity working, the ability to perform the usual types of activities under the DPA, such as allocating fuel, setting curtailment, and priorities in their region.

Chairman **Byrd**. Who determines that a communications cutoff condition exists?

Mr. **Badolato**. That is determined at the national command authority level.

U.S. ENERGY VULNERABILITIES

Chairman **Byrd**. In discussion with the subcommittee staff, you have indicated that in terms of U.S. energy vulnerability, oil supply remains the most serious problem, but electricity is the first priority.

Would you explain that statement?

Mr. **Badolato**. Yes; I will, Mr. Chairman. No matter how we look at the problem, oil is the area that is the most important energy source for our country as well as other industrialized countries.

However, oil is very robust in a sense that we have many systems, sources, and pipelines. From a purely emergency crisis action point of view, it is the major international aspect that we have to carefully look at in emergencies.

However, electricity, which is the nerve center of our industrial society, is different from oil and must be given a high domestic priority because we can't store it. Its networks are widespread over the country and it has so permeated our society that we can't function without it.

Chairman **Byrd**. In your budget justification, you describe fiscal year 1989 activities that include working with strategic electric power systems to assess the vulnerabilities after improvement resulting from initiatives with the North American Electric Reliability Council.

Would you identify the improvements and the initiatives?

Mr. **Badolato**. Yes, Mr. Chairman, very briefly. We worked with the North American Electric Reliability Council, which is the umbrella electric utility organization, organized after the severe New York blackout in 1965 to ensure that our electric power was reliable.

We had gone to them several years ago with our understanding that we may be heading into an area where our security and reliability were threatened. We were mildly concerned and shared concerns with them, and wanted to see if we had a similar viewpoint as how they felt about security.

They undertook a 1½-year study on the question of reliability. There were a number of areas examined, including terrorism, sabotage, and severe weather. They provided us with a copy and advice, and informed the national security advisor in the White House.

This was the first time that the electric power industry has taken a look at vulnerability in a nationwide sense. Some of the areas which it looked at, we feel are really very, very valuable. These include their very critical spare parts status, such as transformers, high-voltage step-down transformers; the way they work with the FBI insofar as security planning is concerned; and also building various economical ways of engineering security into their thousands and thousands of remote sites.

MAJOR ELECTRICITY VULNERABILITIES

Chairman **Byrd**. What are the major vulnerabilities to our electricities?

Mr. **Badolato**. The major vulnerability I think is probably well-known. The electric power system stretches over thousands of miles, and we have certain key spare parts and other small parts and switches which can be destroyed either by severe weather or by adversaries. An example is the high-voltage step-down transformers.

I would be remiss if I didn't say to you, Mr. Chairman, that the electric power industry is working very hard to examine and see the types of mitigation that can be made on the vulnerabilities.

Chairman **Byrd**. What are other vulnerabilities?

Mr. **Badolato**. The major vulnerability we see in the electric power industry, not only in the United States but throughout the world, are the transmission lines. All around the world, since 1980 we have had literally 8,000 incidents perpetrated against electric power lines and two-thirds of those have been against the power transmission lines.

Compare this to the incidents that we have in the United States, where we saw 27 incidents that were done by people in the United States in 1988, and about 38 in 1989.

We also see two-thirds are perpetrated against power lines, either cutting the power or shorting out and burning the wires down, or shooting out the insulators.

Chairman BYRD. Are these isolated incidents or are they in some way related?

Mr. BADOLATO. We are pretty sure that they are isolated incidents. One of the things we are watching very carefully, and working on with the North American Electric Reliability Council, is to assure that we don't start to get multisites, regional types of activities that look like they have a pattern, where people are dedicated to trying to black out large segments of this country.

REDUCED ELECTRICITY SUPPLY TO NEW ENGLAND

Chairman BYRD. Hydro-Quebec has told the New England Power Pool officials that it will not be able to deliver power under interruptable contracts for 1 year beginning this September due to an extended drought in Northern Quebec, and an unexpected high load growth in the Province.

This would mean a loss of 5 percent of New England's surplus power needs.

Is this a vulnerability to power needs?

Mr. BADOLATO. We think it more an inconvenience and would require the electric power industry, in particular our New England Power Pool, to coordinate and wheel in more power during the summer months from other power councils, such as out in the Midwest, and the Mid-America Pool.

Chairman BYRD. So there are other sources which can make up for the loss of supply?

Mr. BADOLATO. Yes, Mr. Chairman.

Chairman BYRD. The 5 percent.

Mr. BADOLATO. Yes, Mr. Chairman.

COAL VULNERABILITY

Chairman BYRD. In assessing the vulnerabilities to you as energy supplies, would you agree that coal is not only our most abundant domestic energy resource, but is also the least vulnerable to a large hostile action?

Mr. BADOLATO. Mr. Chairman, I certainly would. Coal is extremely robust. We have looked at this resource and we have worked very closely with the coal industry.

As you know, they are not without their vulnerabilities, too. It mainly lies in the electric power being supplied, to either dig or move the coal, as well as the transportation systems.

However, with that in mind, we see redundancy and availability of good transportation systems. Coal is and will be in a severe national emergency, as it was in World War II and in Korea, the backbone of our industrial effort.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. All right. There will be other questions submitted by other members, Mr. Badolato. And if you would please respond to those promptly for the record.

Mr. **Badolato**. Yes, sir.

Chairman **Byrd**. Thank you very much for your testimony today.

Mr. **Badolato**. Thank you, Mr. Chairman.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

International Commitments

Question: The U.S. participated in the Sixth Allocation Systems Test during 1988.

What were the results and "lessons learned", and how do these compare with the results from the AST-5?

Answer: The purpose of the IEA Allocation Systems Tests, such as AST-6, is to train government, industry and IEA Secretariat personnel in the essential procedures and mechanisms of the IEA Emergency Sharing System (ESS). In both AST-5, and AST-6, participants agreed that the training objectives were met.

The primary difference between AST-6 and AST-5 was the introduction of the new "Wider Window" concept, which allows for redirection of oil over virtually the entire ESS monthly cycle. This feature adds considerable flexibility to the ESS and allows it to operate in greater consonance with the market. All participants in the test agreed that the "Wider Window" concept materially improved ESS operations.

As a result of AST-6, the following major areas were identified for future action by the IEA:

-- Updating the Emergency Management Manual to incorporate those new features -- in particular the "Wider Window" concept -- which were judged especially successful during the Test.

-- Assessing the implications of changes in market structure including handling of product requirements, relative use of long-haul, short-haul and spot crudes, refinery structures, industry integration, possible transport problems and spot, forward and futures market development.

-- Improving data quality, including possible improvements in IEA data questionnaire instructions.

-- Considering the timing, duration, form and content of future tests and interim training sessions.

Question: Would you explain how these tests differ from WINTEX/CIMEX '89, GLOBEX, and REX-88 BRAVO?

Answer: The Allocation Systems Tests (e.g., AST-6) are sponsored by the International Energy Agency, and involve the participation of the 21 IEA member governments in their capitals, approximately 40 oil companies at their headquarters, and the IEA Secretariat staff in Paris. The scenario is a severe energy supply disruption (at least a 7% shortfall -- in order to activate the IEA Sharing System), but it does not postulate military hostilities; the reasons for the disruption are left undefined. During the test, participating oil companies as well as governments complete oil supply data questionnaires, after which participants exercise redirection of oil supply in accordance with the IEA formula by simulating purchases and sales of oil, assisted by an industry group operating at IEA headquarters.

The WINTEX-CIMEX test series is sponsored by the North Atlantic Treaty Organization (NATO) and is a command post exercise involving the simulated movement of military resources and implementation of supporting civilian programs in a crisis/wartime setting. Participation is by the 16 NATO nations in their capitals and at their various military locales, and at NATO Headquarters in Brussels. The scenario is wide ranging, and the disruption of oil and other energy supplies is only part of the larger picture. Countries provide oil supply forecasts based upon continuing developments in the dynamic crisis/war scenario. Industry experts work with government representatives to analyze the oil supply situation and to recommend redirection of supply to support military and civilian requirements.

The GLOBEX test series involves large scale war games sponsored by the Naval War College. The exercise is carried out at the campus of the Naval War College, and participants are drawn from the military and from U.S. Government civilian agencies. The exercise is a complex simulation that focuses on national security strategy, operational logistics, and related strategic planning matters.

The REX series consists of two types of civil readiness exercises sponsored by the Federal Emergency Management Agency (FEMA) and focuses on either mobilization (Alpha type) or continuity of government (Bravo type). These exercises generally are held in conjunction with military readiness exercises sponsored by the Department of Defense. As in the case of WINTEX-CIMEX, the scenarios are broad, affecting numerous resources, including energy. The next REX exercise, REX-ALPHA 89, is scheduled tentatively for the Fall of this year.

National Defense Executive Reservists

Question: How are candidates selected for the National Defense Executive Reserve? How are they trained?

Answer: NDER candidates are recruited from the top echelons of energy industry management. Industry assists DOE in NDER recruiting by designating executive candidates in accordance with selection criteria developed by DOE NDER program managers. To be selected, candidates must be decisionmaking executives whose industry skill/job assignment is the same as their NDER assignment and who can successfully obtain a security clearance, and be able to take part in yearly NDER training.

DOE presented a recently developed DOE NDER Orientation Course at the DOE Central Training Academy (CTA) in Albuquerque in November, 1988. Two more sessions of this series will be presented to 20-25 reservists in May 1989 at Chicago and in September 1989 at CTA. As a part of this training, reservists participate as team members in an exercise that simulates emergency conditions. Also, NDERs participate in other simulations that involve other Federal, state and local emergency officials. DOE NDERs take part in FEMA Continuity of Government exercises and the Defense Department's Global War Games in July each year. DOE NDERs recently took part in a mobilization simulation conducted by the National Security Council at the White House. Although reservists commit to be available up to 10 days a year, NDERs usually devote no more than 2 to 3 days a year in training activities.

Question: You indicate in your budget justification you will bring the strength of the National Defense Executive Reserve to 400 by the end of FY 1990. What is the current strength of the NDER?

Answer: The following table shows the strength of the NDER:

UNIT	APPOINTED	PENDING CLEARANCE	TOTAL	GOAL
Electric	48	17	65	110
Coal	46	12	58	63
Gas	14	6	20	120
Oil	10	0	10	110
Total	118	35	153	403

As the table shows, the number of NDERs is dynamic, i.e., retirements, recruiting and processing is constantly taking place. However, significant progress has been made in staffing the electric power and coal units. While the gas unit shows a comparatively small number, this is a new unit that was only begun in the past year and is now proceeding at a pace that justifies optimism for substantial increases in the short-term future. The oil unit has been hampered by industry concerns over conflict of interest and anti-trust vulnerabilities. Recent consultations with oil industry executives, however, have shown significant promise for overcoming these concerns and permitting better progress in the future.

Question: Are you experiencing a turnover problem among the Reservists?

Answer: Reflecting the increased emphasis on NDER recruitment by the Reagan Administration starting in 1981, the average tenure for DOE NDERs is now about 8-10 years. Younger executives are now being recruited for DOE NDER units. The DOE NDER Program is subject to turnover due to attrition that would be considered normal for any organization of its size. Due to the recent increased involvement by DOE's NDERs in energy emergency activities, DOE reservists' enthusiasm for the program is now quite high.

Question: What is the turnover rate?

Answer: Last year there were four NDER vacancies out of a total of 153 members.

Question: How do you protect against the possibility that members of the National Defense Executive Reserve could exploit an energy emergency for private gain?

Answer: There are a number of statutory and other safeguards that should ensure that NDERs do not exploit an energy emergency for private gain. First, persons serving as NDERs may not be appointed to policy-making positions, and thus would not be in a position to formulate energy policies which might favor their current or former employer. Second, irrespective of what positions they hold, all

NDER members will serve under the supervision of full-time DOE employees. Finally, NDERs are subject to the Federal criminal statutes covering conflict of interest, and the antitrust laws.

Natural Gas Emergency Response

Question: You state on page 428 of the budget justification, that in FY 1989 you will "continue to address through analysis and appropriate program action, critical natural gas issues that arise in the course of exercises and interagency group activities."

Would you identify those critical gas issues?

Answer: There are several critical natural gas issues as seen in tests and exercises and other interactive group participation.

The first pertains to market issues whereby the natural gas industry strives to accommodate recent rulings and decisions affecting natural gas sales and supply. Issues such as the take or pay controversy, the open access ruling (FERC Order 500), or simply normal competition, reflect critical decision-making steps which may or may not influence emergency preparedness and response.

The second concerns system issues which define the means and methods through which the gas industry can operate and respond to a national security emergency. Examination of these system issues revolves around the vulnerability of natural gas facilities to sabotage and terrorist attack, the capability of the industry to meet a surge in energy demand for industrial mobilization, and the preparation for emergency operations through cooperation between the industry and the Federal government.

We have conducted numerous emergency simulation exercises with the natural gas industry where the above-mentioned issues have arisen. Many of these are being assessed for emergency planning purposes. It is our intent to keep informed about issues which involve the industry- government interface for national security emergency preparedness.

Question: Your justification indicates that in FY 1990 you will "continue to assess changes in the U.S. natural gas industry to ensure that emergency response procedures appropriately reflect any such changes."

Would you provide some examples of these changes?

Answer: The natural gas industry has undergone a significant number of changes in the past few years that have reshaped the traditional market order. In the past, most of the industry was organized in a way that gave the interstate pipelines great leverage because of their crucial link between the producer and the local distribution company (LDC). The issuance of Order 436 (and subsequent orders) by the FERC has opened access to the interstate pipeline system; thus many pipelines are now selling the transportation of natural gas rather than the gas itself. LDC's no longer are required to buy gas directly from interstate pipelines.

Many if not most LDCs now buy at least part of their supply directly from producers using the pipeline as a transporter only. These direct purchases of natural gas have in effect transferred much of the supply risk from the pipeline to the LDC. If a producer is unable to deliver gas then the LDC may find itself in a tight supply situation. The pipeline is no longer obligated to find another supply source. A national or regional supply imbalance that is not necessarily severe could result in many LDCs searching for new supply sources that if not found in time, could possibly endanger the deliverability to high priority users.

The restructuring of the industry has made it more competitive. Producers can now compete with pipelines for customers. The net effect of this has been to put a squeeze on pipeline profits. At the same time the industry has also seen wide swings in demand as dual fuel users have vacillated between oil and gas. Both of these factors, as well as others, have tended to make pipelines more cautious about investments to upgrade their capacity. As a result, many pipelines are operating very close to their system capacity. This could cause some tightness in the market during an extremely cold winter.

Question: What do you consider to be the major vulnerabilities to our natural gas supplies?

Answer: U.S. natural gas supplies are quite secure, in that the United States imports only about 5%, and our imports are from Canada, with whom we enjoy a good trading relationship.

The natural gas transmission and distribution system in the United States consists of more than one million miles of pipeline, and constitutes such a complex set of targets that the opportunity for incurring crippling damage is reduced. However, the dual fuel capability of many industries is a safeguard against the effects of a major disruption of the natural gas supply.

The most vulnerable components of natural gas systems are critical pipeline interconnections, river crossings, compressor stations, and city gate stations. The Department is working with the gas industry to identify means by which specific vulnerabilities can be mitigated or eliminated.

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Emergency Preparedness

Question: The National Energy Policy Plan defines energy stability as a condition "in which problems of energy availability and price do not destabilize the U.S. economy or our way of life." Energy security means that the U.S. is less vulnerable to energy disruptions and able to handle disruptions should they occur. Energy strength derives from a balanced and diversified mix of energy resources (pg. 409).

Using that criteria, can you assess where we stand today compared to where we were eight years ago? A year ago?

Answer: We are better prepared than ever before to confront an energy supply emergency. Strategic stocks of oil held by member countries of the International Energy Agency worldwide have increased from 280 million barrels in 1980 to over 950 million barrels today. During this same time period, the U.S. Strategic Petroleum Reserve (SPR) inventory increased more than fivefold to about 565 million barrels of oil. The contributions of nuclear power and coal have also increased, emphasizing the continuing efforts to diversify and develop strategies for deterring and effectively responding to oil supply disruption.

Although dependence on oil supplies from the Persian Gulf is predicted to grow, a number of factors have caused a decrease in the vulnerability of the United States and other industrialized nations to an oil supply disruption:

- o Government regulatory policies employed during past disruptions have been replaced with policies that emphasize reliance on the market, complemented by drawdown of the SPR, rather than government programs to price and allocate supplies.
- o Oil consumption in the Organization for Economic Cooperation and Development (OECD) is lower today than it was in 1980. Non-OPEC supplies have increased by more than 25 percent, and increased use of coal, nuclear power, natural gas, and renewable energy supplies have diversified the OECD's energy supplies and reduced its dependence on potentially insecure supply sources.
- o The Free-Trade Agreement that recently went into effect between the United States and Canada improves the security of U.S. import sources. Imports of Canadian oil, gas, and electricity already have reduced U.S. reliance on Persian Gulf oil.
- o There exists a potential for some fuel switching in the U.S., estimated to be in the range of 0.4 to 1.2 million barrels per day using natural gas, which can also offset some the lost petroleum supply during a disruption.

The Department has also taken decisive steps over the last two years to strengthen our response capability should a disruption occur. These activities have included reorganizing our staff, developing new emergency organizations and procedures, revitalizing our interaction with the energy industry and developing a close working and planning relationship with state energy organizations. Powerful new management tools incorporated Departmental capabilities and crisis management systems into a structurally integrated framework which can enhance U.S. preparedness. These activities will ensure that DOE's emergency preparedness program remains dynamic in a changing domestic and international energy market and is capable of deterring, as well as responding to, any energy supply emergency arising from foreign oil disruptions or from domestic incidents involving our basic energy industries.

Strategic Petroleum Reserve Security

Question: As part of your responsibilities to reduce the vulnerability of the Nation's energy systems to energy supply disruptions, have you analyzed the security of the Strategic Petroleum Reserves or compared SPR's security system to reserves of other nations'?

Answer: Yes, and as a result, the Department of Energy has in place an integrated security program which provides protection for Strategic Petroleum Reserve assets through detection, deterrence, and mitigation of malevolent acts such as terrorism, sabotage, vandalism and theft. The program consists of a protection force of over 300 armed guards, approximately 100 of whom are trained in special weapons and tactics; physical security systems which include fencing, lighting and intrusion detection devices; arrangements for support from local, state, and Federal authorities when necessary; and a recovery plan which addresses rapid repair of any damage associated with an incident. Periodic security exercises, approximately 6 or 7 per year, are conducted to test the SPR's response to various scenarios and to provide tactical field training to protection personnel.

The SPR security posture is designed to address a wide range of potential threat scenarios, and the Recovery Program provides for any system repair required to reestablish operational capability lost through acts of sabotage or terrorism. Considering the petroleum supply as a whole, including pipelines, refineries, and private storage facilities for crude oil and products, it is apparent that the protective measures taken at SPR facilities greatly exceed industry standards. In any case, the primary asset itself, the crude oil in storage, is generally acknowledged to be unassailable given the nature of its dispersed storage in deep underground caverns. SPR staff have visited a number of strategic and industrial petroleum reserve sites in several European countries and Japan. The physical security measures at the U.S. SPR facilities are more stringent than those observed in other nations.

Energy Emergency Key Assessments

Question: The FY90 budget indicates that you will maintain extensive support to resolve major SPR issues such as directed sales, minimum price and Jones Act waiver requirements (pg. 418). In addition, you are proposing to initiate an analysis of new issues such as the need for an IEA negotiation strategy and the implication of less than maximum drawdown.

Reviewing the previous year's budget, aside from some Jones Act work, I do not find these activities mentioned.

Were these tasks performed in the past?

If so, by whom?

Answer: The Office of Energy Emergencies, as part of its continuing analysis of SPR sales and distribution policies and procedures, has conducted analyses of these issues in previous years.

Further analysis of these issues was implicit in the FY89 budget, and such analysis was made explicit in the FY90 budget in order to provide more specificity for the budget review.

Question: Why do you feel they are necessary in FY90?

Answer: An ongoing evaluation of issues pertaining to the sale and distribution of SPR oil is justified to ensure the continued effectiveness of drawdown policies and procedures in the light of changes in the world petroleum market. For example, it is important to consider the effect on SPR preparedness of such disparate factors as the increased role of crude oil and product futures markets, the growth in product imports, and changes in tanker availability. Moreover, it is appropriate to review these issues with regard to their consistency with the overall policies of the Bush Administration.

Question: Besides an IEA negotiation strategy, can you identify some of the new issues you are considering?

Answer: New issues include --

-- An evaluation of alternative SPR sales mechanisms, such as a forward or contingent sales contract, to accelerate the sales and distribution of SPR oil in an emergency.

-- The development of specific guidelines for determining when and at what rate to release SPR oil.

-- Development of a "fast track" methodology to determine the crude oil mix for SPR drawdown.

Other issues are being revisited which have been investigated with varying results in the near to immediate past --

-- Economic analysis of expanding the SPR to one billion barrels.

-- Evaluation of the prequalification of bidders for the first SPR sales cycle.

-- Analysis of the indexing of SPR sales prices.

-- Consideration of the need for a regional petroleum reserve.

-- Whether to seek authority to export to non-US Caribbean refiners in exchange for product.

-- Whether to seek authority to divert SPR oil in transit without a drawdown decision.

Question: Can you elaborate on what you consider to be the "need for an IEA negotiation strategy?" Why is less than maximum drawdown now an implication?

Answer: Over the past several years the United States has been working in the IEA Standing Group on Emergency Questions to develop procedures to implement a coordinated drawdown of stocks, as provided for in the July 1984 Governing Board Decision on Stocks and

Supply Disruptions. In September 1987 the Governing Board adopted such procedures, known as the Operations Manual for Coordinated Emergency Response Measures (CERM). These procedures provided that, in the event of a severe oil supply disruption, a consultative group is to be convened to reach agreement on the timing and volume of a coordinated stockdraw and the coordinated implementation of supporting programs (e.g., consumption reduction measures). For this reason, it would serve us well to carefully consider how we could best approach these negotiations, including responses to other nations' proposals and possible fall-back positions. That is not to imply adoption of a strategy of drawing down the SPR at less that the maximum rate; rather, the point is that we are obliged to consult with our allies over our coordinated stockdraw, including its volume.

Energy Emergency International

Question: You have requested an increase of 8 percent (FY89: $719,000; FY90: $779,000) for the Energy Emergency International program. Reviewing the key activities (pg. 419) anticipated for FY90, however, it appears that you will be doing about the same or even less than in FY89.

Is the increase for base adjustments?

If not, why is an increase necessary?

Answer: The increase of 8 percent (or $60,000) is due to: (1) the 3 percent increase in personnel salaries; and (2) the assignment of one additional FTE to support international energy emergency program activities (this FTE drawn down from another OEE account). While the description of the 1990 program (p. 419) nearly parallels that of 1989, it does not reflect our increasing level of effort and responsibility in this area. Recently the Director of the Office of Energy Emergency Plans and Integration was appointed Vice-Chairman of the IEA Standing Group on Emergency Questions. In addition, the Deputy Director of this office was appointed Chairman of the NATO Petroleum Planning Committee Working Group. That U.S. officials now hold these positions is a recognition of our high level of participation within NATO. We believe that one additional FTE is needed to support these U.S. officials' additional duties and to improve our performance in these organizations.

National Defense Executive Reserves

Question: In response to a question at last year's hearing, the Department indicated that the total goal for the National Defense Executive Reserve is 325. You also indicated, however, that emergency simulations will provide a continued reevaluation of what staffing needs would be to enhance DOE emergency response capabilities.

The FY90 budget proposes to increase the size of the reserve to 400 NDERs (pg 425). This would more than double the size of the Reserve.

Why the change in plans?

Answer: NDER participation in emergency simulations, continuity of operations, and upgraded Departmental planning activities indicates the need for more reservists to act as state and local government liaison in emergencies, and as energy representatives on continuity of government teams. Also, current initiatives between DOE and the oil industry regarding the reactivation of the long-dormant DOE Oil NDER unit could result in increased recruitment of oil executives for the reserve.

NDER staffing goals are based on industry recommendations and the essential functions each unit will be required to perform in order to respond to emergency needs. Any changes in mission and objectives could be expected to result in changed goals. Based on the current state of planning, however, a 400 member NDER is the organization size that eventually will be needed.

Energy Emergency Management

Question: Can you elaborate on the reasons behind the proposal to expand and refine the Department's natural gas emergency response capabilities (pg. 428).

Answer: We have a growing concern over the vulnerability of the natural gas supply system to disruption by natural or man-made causes, and the potential implications of such disruptions, if sufficiently widespread, on the economy and national security of our country. Because of this concern, we are examining means of expanding our effort, in conjunction with the gas industry and state and local governments, to more clearly identify the measures to be taken to develop mitigation procedures and reduce supply vulnerability.

The ability of the natural gas industry to meet demands placed on various systems is likely to be severely tested in the next few years. The supply situation in California this past winter is likely to be a harbinger of more system imbalances in the future. Because of certain supply imbalances in Southern California, caused in part by the drought in Northern California, gas utilities had difficulty meeting demand and exercised their curtailment plans. The systems were constrained due to early use of storage gas and maximum pipeline capacities. In an effort to respond to natural gas supply emergencies, we are presently studying how the natural gas emergency authorities contained in the Natural Gas Policy Act can be incorporated into our program.

The natural gas industry is now about midway in the transition from a highly regulated industry to one where market forces are controlling. The movement in the direction of a market-oriented industry has introduced a number of new factors that will affect emergency planning for natural gas. The decline in gas well drilling, lack of investments in pipeline expansion, and changes in the structure for marketing gas are examples calling for a need to refine and expand our response capabilities.

Energy Emergencies-Domestic

Question: In the Domestic Energy Emergencies program, the budget indicates that the same activities will be carried out in

FY90 which were carried out in FY89 (pg. 432). In addition, you are proposing to initiate joint planning with representatives from State energy and Public Utility Commission organizations. This effort is designed to help ensure that local plans for emergency energy distribution reflect the energy needs of end-users.

Why do you feel this effort is necessary in FY 90?

Answer: The Department of Energy revitalized national energy emergency preparedness in 1988 through the conduct of four regional seminars to educate and sensitize federal, state, and local government personnel, as well as energy industry leaders, on the roles of DOE, states, and industry in planning for and responding to energy emergencies. Documentation of the 1988 effort is contained in two publications already made available: REGIONAL DIFFERENCES, COMMON CONCERNS: Federal-State-Industry Roles in Energy Emergency Preparedness by the Strom Thurmond Institute, Summer 1988, and State and Federal Roles in Energy Emergency Preparedness by the National Research Council, January 1989. In addition, the National Research Council includes recommendations concerning future efforts, responsibilities, and funding necessary for continued development of DOE's federal-state-industry energy emergency preparedness program. Now that there is an awareness of the need for energy emergency planning, the logical next two steps toward national preparedness include assisting each state, Puerto Rico, the Virgin Islands, and the District of Columbia to improve their individual energy emergency plans and then to build regional unity through states' exchanging information and sharing their planned response measures, ideas, and authorities. DOE's 1989 and 1990 program has been designed to accomplish these two steps. A key element in the refinement of individual plans into homogeneous and mutually supportive documents between states is the clear identification of customer usage patterns within each state. At present, consumer population energy consumption is only maintained by a few states (such as California, Oregon, and Connecticut) and by DOE. A specific topic of the 1989 seminars will be information on the data bases and sources of information -- such as on energy usage patterns -- available to assist states in their energy emergency planning. It is anticipated that in 1990 the majority of states will undertake to collect and/or verify this information for the first time.

Question: How will this planning effort differ from planning efforts in the past?

Answer: In the past, there has been no advance attempt by the Federal government, prior to an emergency, to integrate its standby plans for access to scarce energy supplies with those of state and local entities. Thus, standby plans prepared by state and local governments and public utility commissions which were used previously to respond to energy emergencies were devoid of national security considerations.

Under the auspices of the Interagency Group on Energy Vulnerability, work has been initiated to identify energy end-users who are considered essential to national security. Once identified, the intent of that program, ultimately, is to foster a cooperative merging of these users with others already indicated in standby plans put in place by state and local authorities. While the work is far from complete, it is sufficiently advanced to begin the dialogues with state and local authorities.

Question: You have requested a 17 percent increase in a portion of the Domestic Energy Emergencies program which coordinates the Department's headquarters and field structure for an emergency (pg. 435). This increase is in response to directives from the White House and from the Federal Emergency Management Agency to expand and integrate this effort to include national labs, state, local and private industry organizations.

Can you elaborate on this increase?

Answer: The requested increase is to support the Department's continuity of government (COG) planning, which has previously been run without impacting other Office priorities. Earlier stages of planning were primarily at the national level, and regional and local planning was only at the conceptual stage. Such planning was manageable within previous budget levels. Specifically the increase is needed in order to obtain:

- specialized office equipment (secure telephones, personal computers, audio/visual equipment, and a copy machine,)
- travel funds for Headquarters planners, Operations Office planners, laboratory personnel and NDERs (National Defense Executive Reservists) in order to attend meetings, training, gaming exercises as well as Government-wide classified readiness exercises,
- contractor, data and field support, specifically in the development of Standard Operating Procedures (SOPs) for the Continuity of Government program, the acquisition and development of energy databases and ADP software, and Operations Office and National Laboratory personnel support for the COG program.

Question: Do you completely agree with this directive? If not, why didn't you propose it earlier?

Answer: The Department of Energy firmly supports both the intent and purpose of these National Security Emergency Preparedness (NSEP) directives and the general direction that the COG program is taking under such direction. The planning process delineated within this framework is well defined and is proceeding within DOE in a highly systematic way according to a realistic time schedule. This process is being accomplished in logical stages and has reached the point where a modest amount of additional resources is warranted.

Question: What else was included in the directives?

Answer: These NSEP directives cover the entire spectrum involved in national preparedness planning:

- "National Security Emergency Preparedness Priorities," dated September 15, 1987, established NSEP goals,

- "National Security Emergency Preparedness Priorities," dated April 27, 1988, provided minor revisions to the NSEP goals established in the September 15, 1987, directive,
- "Functional Response to National Security Emergencies," dated June 27, 1988, called for the development of national security plan using a functionally-oriented structure,
- "Support for National Security Emergency Preparedness," dated August 31, 1988, called for the existence of fully rostered and trained emergency management teams at both the national and regional levels, and
- Executive Order 12656 of November 18, 1988, entitled "Assignment of Emergency Preparedness Responsibilities." This Executive Order reaffirms that the NSEP policy of the United States is to have sufficient capabilities at all levels of government to meet essential defense and civilian needs during any national security emergency.

Program Initiatives

Question: I don't know if it is my imagination, the natural evolution of the agency, or if you see something in the energy world that has led you to request a small increase for a variety of different initiatives.

We have covered some of them today and I'll submit questions on some of the others. Just to mention a few, however, you are:

*proposing to initiate an analysis of new issues such as the need for an IEA negotiation strategy and the implication of less than maximum drawdown (pg. 418);

*proposing to increase the size of the National Defense Energy Reserves from 325 to 400 (pg. 425);

*proposing to expand and refine the Department's natural gas emergency response capabilities (pg. 428);

*proposing to initiate joint planning with representatives from State energy and Public Utility Commission organizations (pg. 429);

*and proposing to expand and integrate planning for domestic energy emergencies to include national labs, state, local and private industry organizations (pg. 435).

Am I reading too much into this budget or are you reacting to something?

Answer: During the past two and one-half years, the Office of Energy Emergencies (OEE) has been in the forefront of Federal efforts to revitalize this Nation's preparedness for energy emergencies. As previously mentioned, OEE has taken initiatives in a number of areas critical to the Nation's energy security. Many of these initiatives were taken because of a renewed emphasis on national security emergency preparedness. Other activities were undertaken as the program has evolved, such as the development of an

IEA negotiation strategy for a coordinated drawdown of government strategic stocks, and the joint planning with representatives from State energy offices and Public Utility Commissions. Some activities, such as the expansion of natural gas emergency response capabilities, have been undertaken after our experience with planning for petroleum supply interruptions, incorporating lessons learned from that experience and redirecting resources to these initiatives.

The budget reflects the importance the Department places on energy emergency preparedness. We believe that we are better prepared than ever before to deter or mitigate an energy supply disruption, but we must maintain that readiness, improve it where necessary, and not become complacent.

SUBCOMMITTEE RECESS

Chairman **Byrd**. The subcommittee will stand in recess for 20 minutes.

[Whereupon, at 1:12 p.m., Monday, March 13, the subcommittee was recessed, to reconvene at 1:30 p.m., the same day.]

(AFTERNOON SESSION, 1:35 P.M., MONDAY, MARCH 13, 1989)

The subcommittee met at 1:35 p.m., in room S-128, the Capitol, Hon. Robert C. Byrd (chairman) presiding.

Present: Senators Byrd, Burdick, Bumpers, McClure, Stevens, and Domenici.

DEPARTMENT OF THE INTERIOR

U.S. FISH AND WILDLIFE SERVICE

STATEMENT OF STEVEN A. ROBINSON, DEPUTY DIRECTOR

ACCOMPANIED BY:

- JAY GERST, ASSISTANT DIRECTOR, POLICY, BUDGET AND ADMINISTRATION
- KATHY TYNAN, ACTING BUDGET OFFICER
- RONALD LAMBERTSON, REGIONAL DIRECTOR, BOSTON REGION
- RALPH MORGENWECK, ASSISTANT DIRECTOR FOR FISH AND WILDLIFE ENHANCEMENT
- DAVID L. OLSEN, ASSISTANT DIRECTOR FOR REFUGES AND WILDLIFE
- GARY EDWARDS, ASSISTANT DIRECTOR FOR FISHERIES
- MARV PLENERT, WESTERN REGIONAL DIRECTOR, OREGON
- MIKE SPEAR, SOUTHWEST REGIONAL DIRECTOR, ALBUQUERQUE
- JIM GRITMAN, TWIN CITIES AREA REGIONAL DIRECTOR, MINNESOTA
- JAMES PULLIAM, SOUTHEASTERN REGIONAL DIRECTOR, ATLANTA
- GALEN BUTERBAUGH, ROCKY MOUNTAIN REGIONAL DIRECTOR, DENVER
- WALT STIEGLITZ, REGIONAL DIRECTOR, ALASKA
- DICK SMITH, REGIONAL DIRECTOR FOR RESEARCH AND DEVELOPMENT
- HARVEY NELSON, EXECUTIVE DIRECTOR, NORTH AMERICAN WATERFOWL MANAGEMENT PLAN
- ANTHONY ITTEILAG, DIRECTOR OF BUDGET, DEPARTMENT OF THE INTERIOR

BUDGET REQUEST

Chairman BYRD. This is the time scheduled for the Department of the Interior and Related Agencies Subcommittee to consider the fiscal year 1990 budget request for the U.S. Fish and Wildlife Service and the Minerals Management Service.

Testifying on behalf of the Fish and Wildlife Service will be the Deputy Director, Steven A. Robinson; the fiscal year 1990 appropriation request is $360,666,000, down $96,030,000 from the fiscal year 1989 allowance.

Of this total $342,042,000 and 5,589 full-time equivalent personnel are proposed for the "Resource management" account.

This request is $18.6 million or 5 percent less than the current level for resource management. The budget proposal also includes a reduction of 115 FTE's in this area.

The "Construction" account would be reduced to $10,105,000 from the fiscal year 1989 level of $47,531,000.

And the "Land acquisition" account, which was funded at $74,759,000 for the current year was proposed at $1,874,000.

This subcommittee understands that the administration will be seeking an increase for Fish and Wildlife Service land acquisition. The amount of that increase is unspecified at this time.

Last, the budget request for the national wildlife refuge fund is $6,645,000, the same as the current level.

PREPARED STATEMENT

Mr. Robinson, we have your prepared statement that will be inserted in the record in its entirety. If you would proceed with summarizing it and identifying the witnesses that you have who will support your testimony.

[The statement follows:]

STATEMENT OF STEVEN A. ROBINSON

Mr. Chairman, I appreciate the opportunity to be with you today to discuss the President's budget for the U.S. Fish and Wildlife Service for Fiscal Year 1990.

The Service is committed to protecting and conserving the fish and wildlife resources of this nation through sound and informed management practices.

We will continue our role as stewards of our natural resources, aiming to ensure preservation of this most valuable legacy to future generations. We enthusiastically embrace our delegated responsibility to effectively manage fish, wildlife and their habitats insuring that coming generations will have the opportunity to experience the value of our heritage.

We have been successful in the last four years in improving the condition of physical facilities on refuges. We believe it is time to focus additional resources on several key areas which are critical to fish and wildlife conservation.

FISCAL YEAR 1990 BUDGET TOTALS

The 1990 budget request of $606 million proposes a realistic plan to maintain essential operating activities and restore and enhance nationally significant resources, while doing our part to meet the targets in the Balanced Budget and Emergency Deficit Control Act.

A total of $360.7 million is included for funds subject to annual appropriations, a decrease of $96 million below the 1989 enacted level, but an increase of $13.7 million above the 1989 President's Budget. This budget is consistent with the previous Administration's request. However, in keeping with the President's commitment to protect the nation's most valuable natural and cultural resources, the Service will be requesting a significant increase for land acquisition activities above the $2 million level shown in the 1990 budget request.

HIGHLIGHTS OF THE 1990 BUDGET

The 1990 budget confirms our resolve to move forward in properly managing for the future through the aggressive pursuit of wetlands conservation and restoration opportunities, the promotion of partnerships with the public and private sector to halt the drastic decline of waterfowl populations, and the return of nationally important fisheries to their historic waters. I would like to expand on these three initiatives as proposed in the 1990 budget request.

WETLANDS CONSERVATION AND RESTORATION

The Service is requesting additional funding to stem the decline in wetlands. Wetlands are a valuable ecological resource that nurture wildlife, help maintain water quality by filtering out pollutants and sediment, check the destructive power of floods and storms, and provide for recreational activities. Approximately 215 million acres of wetlands existed in the contiguous United States at the time of the Nation's settlement. By the mid-1980s, about 95 million acres remained, 44 percent of the original wetlands acreage. Annual wetlands losses average about 450,000 acres.

Agricultural development accounted for 87 percent of wetland conversions in the twenty-year period from mid-50's to the mid-70's. Since that time, a number of programs have been instituted which may slow the rate of loss, including the provisions of the Food Security Act of 1985 (Farm Bill). Under this law, and working with the Department of Agriculture, the Service has the opportunity to conserve and restore essential wetland habitat through the development of perpetual and long-term easements and restoration on marginally productive agricultural lands.

Of the 1.5 million acres in the Department of Agriculture's Farmers Home Administration inventory lands, the Service estimates that over 200,000 acres of wetlands may be preserved and enhanced.

Since 1988, Service efforts have resulted in restoration of 35,000 acres of wetlands at a average cost of $100 per acre. The 1990 budget requests a total of $6.1 million, an increase of $1.4 million above the 1989 level, to restore approximately 25,000 acres of wetlands. This approach offers a lower-cost alternative to wetlands acquisition since no lands are purchased and initial restoration costs have been low.

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

In 1986, as a result of major waterfowl conservation problems, the United States and Canada signed the framework for the conservation of North American waterfowl. In 1988, Mexico joined the efforts of Canada and the United States to improve the conservation of migratory birds and the wetland habitats essential to their survival.

Losses of breeding, migration and wintering habitat have contributed to long-term downward trends in waterfowl populations. In addition to conservation of habitat, the Plan recognizes the need to manage duck harvest through the use of stabilized regulations, to improve breeding ground survey data, to maintain and improve national waterfowl harvest surveys, to minimize the illegal kill of migratory waterfowl, and to expand the research on the effects of predation and disease related to population losses.

The 1990 budget proposes an initial funding level of $3.7 million to adequately establish joint venture coordinators in each of the 6 priority areas, to improve continental migratory bird surveys and populations assessments essential to the implementation of two joint ventures for black ducks and Arctic nesting geese.

FISHERIES

The Service has taken an active role in meeting our Federal responsibility to restore depleted nationally significant fishery resources, to mitigate fishery resources impaired by Federal development projects, and to assist with management of fishery resources on Federal lands.

As part of the Federal commitment to insure mitigation of declining Pacific Northwest fisheries -- resulting from the development and operation of hydroelectric projects -- the Service is proposing an increase of $1.2 million to continue the operation and maintenance of the Lower Snake River mitigation facilities. Costs related to this activity are borne by the project beneficiaries -- power users -- and reimbursed to Treasury by the Bonneville Power Administration.

In 1990 the Service is also requesting $450 thousand to initiate the first phase of a three year program to recover depressed anadromous stocks in the Pacific Northwest. In support of salmon and steelhead restoration activities in the Pacific Northwest, the Service is playing a vital role in implementing domestic and international treaties by producing fish through a combination of hatchery production and habitat rehabilitation. The increased funds will contribute an additional 5.8 million chinook/steelhead to the fisheries.

Let me now briefly summarize other changes in each of the program areas by highlighting the most significant changes from the Fiscal Year 1989 appropriation.

RESOURCE MANAGEMENT

Fish and Wildlife Enhancement - The request for Fish and Wildlife Enhancement activities totals $47.5 million, which includes the wetlands restoration initiative we discussed earlier. Funding for endangered species will total $25.9 million in 1990 compared to $33.7 million in 1989.

Of this $7.8 million reduction, $5 million is due to the termination of the state grant program. This program has generated active involvement by most States in endangered species activities which can be expected to continue. The Service is proposing deferral of recovery activities for 23 species in 1990, resulting in a decrease of $1.5 million. Recovery actions will be continued for the highest priority endangered species, as will law enforcement and research activities supportive of recovery.

The Service is continuing to actively monitor and evaluate the effects of environmental contaminants and continues to devote significant resources to the cleanup of environmental contaminants on Service lands. The 1990 budget provides $23.2 million for contaminant activities related to fish and wildlife resources. The Service is proposing appropriation bill language that would provide no-year authority for $1 million of the funding budgeted for contaminant sample analysis. Availability of no-year funds will allow the Service to maintain a consistent level of sample analysis and provide for more effective use of these funds.

Refuges and Wildlife - Within the $143.6 million requested for Refuges and Wildlife is $3.7 million to support wetlands conservation and enhancement through implementation of the North American Waterfowl Management Plan. The Fiscal Year 1990 budgeted level for operations and maintenance of refuges totals $109.8 million and accommodates an increase of $750 thousand for operation of new refuges, as it is anticipated that the National Refuge System will include 19 new refuges in 1990. Funding will support essential operational activities as well as preservation of endangered species, unique ecosystems, waterfowl habitat and other fish and wildlife values. As funding is no longer needed for the Oregon Coastal Aquarium, a decrease of $1.5 million is proposed. Federal funding provided for Alaska subsistence grants has aided the State of Alaska in initiating and establishing the subsistence program and the 1990 request proposes to eliminate further funding for this program. Highest priority work related to contaminants investigation, irrigation drainwater, fishery management on refuges and water rights quantification and adjudication can be continued within 1990 funding levels.

The 1990 budget for the Service includes a request of $2.5 million for a study program on the 1002 area of the Arctic National Wildlife Refuge. These studies will allow the Service to develop a more comprehensive understanding of the impacts that might occur from oil and gas development activities and make informed management decisions. An increase of $475 thousand is requested for 1990 to address the potential impacts of port facilities on bird use of offshore and nearshore waters and associated habitats, and the migration and feeding of anadromous and nearshore fishes.

A total of $22 million is requested for continuation of the Service's law enforcement program. One of the most compelling problems facing the Department is the growth in drug enforcement problems on lands it administers. In carrying out responsible stewardship of the nation's resources and ensuring preservation of the National Wildlife Refuge System and other lands managed by the Service, an increase of $1 million is requested for drug enforcement. This increase will fund startup of the Service's nationally coordinated drug control program which will enhance cooperative efforts with other law enforcement agencies, including drug enforcement at port facilities. Within the $11.7 million requested for Migratory Bird Management, the Service will continue to fulfill its current responsibilities under the Western Hemisphere Convention as well as the management and monitoring of nongame species at reduced funding levels.

Fisheries - The 1990 budget requests a total of $41.8 million for Servicewide fishery activities, including the operation of 71 fish hatcheries to meet restoration and production responsibilities.

In addition to mitigation and enhancement of Pacific salmon, the Service is requesting an additional $100 thousand for Federal fishery assistance efforts consistent with multi-agency striped bass restoration commitments.

Funds will be used to support a cooperative State/Federal coastal tag and recapture program along the Atlantic coast from Maine to North Carolina. The 1990 budget proposes that $1.4 million for the operation of fish hatcheries and fishery assistance offices on Indian tribal lands, which were transferred to the Service in the 1989 appropriations act, be returned to the budget of the Bureau of Indian Affairs in Fiscal Year 1990. Although funded in the Bureau of Indian Affairs account, the Service may continue to operate these hatcheries. Additional savings, totalling $405 thousand, will occur in 1990 as a result of completion of one-time maintenance projects at three facilities. A decrease of $1.6 million in maintenance funding is proposed in 1990.

Research and Development - The 1990 request for Servicewide research activities is $54.5 million, $7.5 million less than the enacted amount. The requested amount for research is composed of $43.4 million for operations and maintenance of 13 national research centers and 89 field stations, $5.3 million for technical development of scientifically based methodologies to quantify impacts resulting from changing land and water uses, and $5.8 million to operate 41 Cooperative Research Units.

General Administration - The request for General Administration totals $54.6 million, $1.3 million above the enacted amount. The 1990 budget requests an increase of $700 thousand for operating costs of the consolidated Washington Office and increased operating costs of the Finance Center located in Denver, Colorado. In addition, the 1990 budget proposes $100 thousand to support the Convention on Wetlands of International Importance. Funds will be contributed to the Convention's Secretariat to support special projects designed to conserve and protect international wetlands.

The 1990 budget provides for an adjustment of $5.5 million to fund the annualization of the January 1989 Federal employee pay increase of 4.1 percent and Servicewide fixed costs increases, such as General Services Administration space, Federal telecommunications, and postage. The effects of this adjustment will be to defer low priority maintenance projects at refuges, hatcheries and research facilities.

CONSTRUCTION

The Service is requesting additional construction funds totalling $10.1 million to alleviate potential health and safety problems. Within this amount, $3.7 million is requested for dam safety to conduct required reinspections of 84 dams. Also included is $3.0 million for planning, design and initiation of work at Lake Elmer Thomas Dam at the Wichita Mountains National Wildlife Refuge in Oklahoma. In addition to dam safety funding, $3.5 million is requested to address health and safety construction needs at Service facilities.

The 1990 budget does not propose continuance of the Anadromous Fish Grant program or the Emergency Striped Bass Study. The objective of the Anadromous Fish Conservation Act grant program was to encourage interstate cooperation in the management of anadromous fish resources. We believe there is sufficient participation by non-federal entities to insure necessary interjurisdictional cooperation without the incentive provided by this program.

LAND ACQUISITION

For the land acquisition appropriation, I am happy to inform the Committee that for Fiscal Year 1990 the President has proposed to fund LWCF financed Federal land acquisition activities at the 1989 enacted level of $206 million. At this time, the Department of Interior and the Department of Agriculture are finalizing the details for the revised funding level for each land management agency. The Service will provide the Subcommittee with the details of the revised land acquisition request for the Service as soon as it is available.

Receipts to be deposited to the Migratory Bird Conservation Account for wetland acquisition are estimated at $33.3 million in 1990 to acquire an estimated 61 thousand acres in migratory bird refuge and waterfowl production areas.

FEDERAL AID IN WILDLIFE AND SPORT FISH RESTORATION

The Federal Aid in Wildlife Restoration program is funded from excise tax receipts on hunting equipment. Similarly, the Sport Fish Restoration Program is funded from receipts from taxes on fishing equipment, and certain boats and fuels. Both programs provide grants to the States and Territories for projects to restore, enhance, and manage wildlife and sport fishery resources.

The Sport Fish Restoration program has funded over 500 State projects annually. Since the beginning of the program, approximately 200,000 acres were acquired, and nearly 400 fishing lakes were created. It should be noted, that in a single year anglers spent $28.1 billion in pursuit of sport fishing.

Similarly, the Federal Aid in Wildlife Restoration program has funded over 400 State projects annually, including acquisition of wildlife habitat, public access and facilities, and hunter safety. In 1985, hunters spent approximately $10.1 billion.

We are pleased that the States have been able to effectively utilize the Federal aid programs, and in keeping with his prior support for these programs, the President has directed the Office of Management and Budget, in its consultations with the Congress, to take the position that there should be no caps on the vital fish and wildlife programs of the Wallop-Breaux Trust Fund and the Pittman-Robertson Special Fund. Final decisions on funding levels for these programs will be subject to the outcome of Congressional and Office of Management and Budget Consultations on the entire Fiscal Year 1990 budget.

This concludes my prepared testimony. I appreciate the opportunity to appear before the Committee. I would be pleased to answer any questions the Committee may have.

BIOGRAPHY OF KATHLEEN F. TYNAN

Kathleen F. Tynan was selected as the Acting Budget Officer for the Fish and Wildlife Service in April, 1988.

She began her career in 1976 as a budget analyst with the Department of Agriculture, Departmental Administration. She joined the Fish and Wildlife Service in 1980 as a budget analyst in the Division of Program Analysis. From 1983 to 1988, she served as the Branch Chief for Budget Formulation.

Ms. Tynan is a native of Washington, D.C. She received her Bachelor of Arts degree in sociology from Merrimack College, North Andover, Massachusetts, and continued graduate work at George Washington University in Washington, D.C.

BIOGRAPHY OF JAY L. GERST

Mr. Gerst began his Federal career in 1970 as a Personnel Management Specialist intern with the Department of the Army in Texas. He transferred to the Bureau of Engraving and Printing in Washington, D.C., in 1972, where he advanced to a supervisory position at the GS-13 level.

Mr. Gerst joined the Department of the Interior in February 1976, serving as a Branch Chief in the Office of the Secretary. In 1979, he was selected as Personnel Officer, GM-15, for the Office of the Secretary, where he provided program direction and personnel management guidance to the Secretary and other key officials. He was also responsible for liaison with OMB, White House Personnel, OPM, and other Federal agencies.

In 1982, Mr. Gerst was appointed Special Assistant to the Deputy Assistant Secretary - Policy, Budget and Administration. He established and led a task force to develop a nationwide administrative services structure for the newly created Minerals Management Service. He also served as a special projects expert during details to the Office of the Solicitor, the Office of the Assistant Secretary - Indian Affairs, and the Office of the Assistant Secretary - Territorial and International Affairs.

Mr. Gerst joined the Fish and Wildlife Service in 1986, as Special Assistant to the Assistant Director - Policy, Budget and Administration, where he provided senior management advisory services in the form of program studies, organizational reviews, policy, recommendations, and systems and procedural analyses. He was soon named acting Deputy Assistant Director - Policy, Budget and Administration, an assignment that was made permanent with his appointment in the Senior Executive Service in late 1987. In May 1988, Mr. Gerst assumed his current position of Assistant Director - Policy, Budget and Administration. In this capacity, he directs, formulates, and administers broad nationwide administrative operations including organizational design, personnel management, financial management, accounting, contracting and procurement, engineering, general services, automated data processing systems, safety and security, and numerous associated administrative support functions.

Mr. Gerst is a native of Glendale, California. He received his Bachelor's Degrees form the University of Texas at El Paso, and a Master of Business Administration from the University of Arizona. His professional memberships include the International Personnel Management Association and the Senior Executive Association. Included among his numerous awards and citations is the Meritorious Service Award of the Department of the Interior, the second highest award bestowed on Department employees by the Secretary. Mr. Gerst is married and resides in Fairfax County.

BIOGRAPHY OF RALPH O. MORGENWECK

Ralph O. Morgenweck, born in Milaca, Minnesota, began his career in natural resources management in 1975 as a member of the Minnesota Department of Natural Resources. He completed his Bachelor's and Master's Degrees in biology at St. Cloud State University and his Ph.D. in wildlife management at the University of Minnesota.

Dr. Morgenweck served as a natural resource specialist in the Minerals Division of the Minnesota Department of Natural Resources. In 1978, he became the Regional Activity Leader for coal and minerals in the Twin Cities Regional Office of the Fish and Wildlife Service. Then in 1980, Dr. Morgenweck joined the Office of Biological Services staff as Coal Project Leader in Washington, D.C.

In 1982, Dr. Morgenweck became the Deputy Team Leader of the Western Energy and Land Use Team in Ft. Collins, Colorado. One year later he was promoted to the position of Team Leader. He became the Director of the National Ecology Research Center when it was created in 1986 through the consolidation of the Western Team, Eastern Energy and Land Use Team, and Ecology Branch of the Denver Wildlife Research Center.

In May 1988, Dr. Morgenweck was appointed Assistant Director - Fish and Wildlife Enhancement.

Dr. Morgenweck was named a St. Cloud State University Outstanding Young Alumni in 1987, has taught wildlife courses for the USDA Graduate School and is a member of several professional and scientific organizations.

INTRODUCTION OF ASSOCIATES

Mr. **Robinson**. On my left is Jay Gerst, Assistant Director for Policy, Budget and Administration.

On my right, Kathy Tynan, our acting budget officer.

Also with us at the table is Ronald Lambertson, the Regional Director in our Boston region.

Also available for questions today is Ralph Morgenweck, Assistant Director—Fish and Wildlife Enhancement; Mr. Olsen, Assistant Director—Refuges and Wildlife; Gary Edwards, Assistant Director—Fisheries.

We have all of our Regional Directors in today, including Marv Plenert, the Regional Director in Portland, OR, the Western region; Mike Spear, who is Regional Director for the Southwest, Albuquerque Office; Jim Gritman, Regional Director for the Twin Cities area, Minnesota; Mr. Pulliam is here from Atlanta, GA, Southeastern region; and Mr. Buterbaugh from the Denver, Rocky Mountain region is here; Walt Stieglitz, the Regional Director for Alaska; and Dick Smith, our Regional Director for Research and Development, located here in Washington.

Also present is Harvey Nelson. He acts as Executive Director for the North American Waterfowl Management Plan.

HIGHLIGHTS OF THE BUDGET

Mr. Chairman, I will be presenting highlights of the Service's 1990 budget request in my opening remarks. But first, I would like to assure you that the general state of the Fish and Wildlife Service is good.

We are continuing to meet our responsibilities as stewards of the Nation's fish and wildlife resources, both on and off Service lands. And, we are diligently pursuing a contaminant monitoring and analysis program, conservation of the Nation's wetlands, and protection of priority endangered species.

Over the next year, we anticipate bringing on 19 new refuges across the country.

I would like to point out that in addition to the $6 million in new refuge funding we have received since 1986, our volunteer program, which Secretary Lujan has emphasized, has provided almost 500,000 hours of service in administering refuge activities across the country.

We are continuing to provide assistance to foreign nations through our activities in support of the Convention on International Trade and Endangered Species and support for the Convention on Wetlands of International Importance.

We are also working in a cooperative spirit with other Federal agencies, States, and private entities in the conservation of natural resources.

The budget we are discussing today is consistent with the previous administration's request; however, in keeping with the President's commitment to protection of valuable natural resources, we will be requesting an increase in Land and Water Conservation Fund land acquisition.

Details of this request have not yet been finalized.

Additionally, the administration has taken the position that the State fish and wildlife programs funded by the Wallop-Breaux trust fund and the Pittman-Robertson grants should not be subject to a funding cap. The Service's 1990 request for appropriations totals $360 million. This budget proposal outlines what we think is a realistic plan for maintenance of essential operational activities and includes initiatives for important Service programs.

WETLANDS

The Service is attempting to alleviate the loss of wetlands in support of the President's policy for preservation of wetlands, and in view of the significance of wetlands to waterfowl and other wildlife populations. During the last 2 years the Service has been successful in the restoration of some 35,000 acres of wetlands in areas that are of vital importance to wildlife, at an average cost of $100 per acre.

In 1990, we are requesting an additional $1.4 million for identification and restoration of wetlands, on agricultural lands in Farmer's Home Administration inventory. In providing assistance to the Department of Agriculture in implementation of the Food Security Act, the Service has input for conservation and restoration of marginally productive agricultural lands.

In an effort to respond directly to the declines in waterfowl populations, we are requesting funding for the North American waterfowl management plan. This funding will enable the Service to work with the Canadians and Mexicans, other Federal agencies and State and private entities for the protection and restoration of waterfowl populations and essential habitat.

This effort comes at a time when the continent's migrating duck population has dropped to the second lowest on record. Drought and the development of low-lying lands have contributed to a drop from an average of 100 million ducks in the 1970's to 66 million based on our surveys in 1988.

Our goals for acquisition of wetlands will be supported through acquisition of an estimated 61,000 acres using receipts from duck stamps and other revenues deposited into the "Migratory bird conservation" account.

FISHERIES

The Service is currently working with the States of Virginia and Maryland for the restoration of the Chesapeake Bay population of striped bass. In concert with the National Marine Fisheries Service, the Service is also developing a study of the striped bass resources of the Albemarle Sound-Roanoke River Basin. An increase of $120,000 is requested for marking and tagging studies of striped bass in the Chesapeake Bay.

The Service will continue to support the implementation of the Pacific Salmon Treaty in coordination with the Canadians, tribes, States, and other user groups. In support of the treaty and mitigation requirements, an increase of $450,000 is requested for initiation of a 3-year program for recovery of chinook salmon and steelhead. This increase will enable the Service to produce an additional 5.8 million salmonids at hatcheries in the Pacific Northwest.

ENDANGERED SPECIES

The Service's 1990 request for endangered species equals almost $26 million from all funding sources. At this funding level, the Service is supporting the implementation of the African Elephant Conservation Act of 1988 and has assigned a full-time African elephant coordinator.

One of the Service's regions is currently testing an initiative called recovery 2000. This is aimed at the recovery of multiple species through a coordination of Federal, State, and local activities.

That concludes my remarks, Mr. Chairman, and I and my colleagues stand ready to answer questions or provide clarification.

FISCAL YEAR 1990 BUDGET REQUEST

Chairman BYRD. As I noted earlier, at the fiscal year 1990 budget request for resource management is, in nominal terms, $18.6 million less than the appropriation for fiscal year 1989.

But, in real terms, considering inflation and other base adjustments, this budget is reduced even more. When inflation is taken into account, the purchasing power of the 1990 request for resource management is reduced by approximately $33 million.

This is a 10-percent reduction in the basic operation of research and maintenance activities of the Service. I believe that such a reduction will cut your programs quite deeply. Such blood-letting hardly seems to be in the kinder, gentler spirit enunciated by President Bush.

Clearly, the administration is not building a better America when it proposes budget levels that would cause our national fish hatcheries and the national wildlife refuge system to operate ineffectively for lack of resources, and to crumble for lack of necessary maintenance funding.

I understand that you may feel required to represent the administration's position. But, when the subcommittee asks for an evaluation of your programs and facilities, they want your best judgment rather than that of OMB.

Would you summarize briefly for the subcommittee which ongoing activities will not be continued in order to achieve reductions?

Mr. ROBINSON. Mr. Chairman, when the budget was formulated, the reductions of 1989 increases that are now being considered were not taken into account. They haven't been considered in the past.

What we are normally asked to do is to live with the reductions as best we can. I've already outlined some of the increases.

If you would like to go down the list of decreases, Mr. Gerst will address those. He will talk about them specifically.

Mr. GERST. In order to live within the funding target, we have had to discontinue congressional increases that were added in 1989. Let me discuss them area by area.

For 1990 we have a total of $26.6 million in add-ons that are not continued which reflects a $7.8 million reduction for endangered species, $7 million reduction in research and development, minus $1.4 million for fishery facilities transferred to BIA. Although we may talk about that a little bit later this is not a reduction in the Fish and Wildlife Service program, but a transfer between bureaus with no net reduction in support to the fisheries program. Other decreases include $1 million for national fish hatchery maintenance, and $3 million for the National Fish and Wildlife Foundation grants—in concert with the administration's stance not to request grant funding.

Chairman BYRD. Is that the complete list?

Mr. GERST. No; that is one portion of it, addressing specific congressional add-ons.

FULL-TIME PERMANENT EMPLOYEES

Chairman BYRD. You dropped 115 FTE's. Is that correct?

Mr. GERST. Yes, it is.

Chairman BYRD. That would probably equate to how many people?

Mr. ROBINSON. One hundred and fifteen fulltime, permanent employees. There would be some multiplication factor with the addition of temporaries. I don't have a direct translation, but the number of people would equate to a number slightly larger than 115 if there are staff who are temporary, or less than full time.

Chairman BYRD. It would equate to 200 to 225 or 230 people?

Mr. ROBINSON. It would equate to a larger number than 115. I can't give you an exact answer because it would vary by program. Those programs that are staffed more on a seasonal basis are staffed with part timers or temporaries who have a larger effect on the number of staff.

This equates to 115 staff-years. It might be equal to 175 or 200 employees on a servicewide basis.

Chairman BYRD. In the endangered species, grants to States would be eliminated—$5 million?

Mr. GERST. Yes; they would.

Chairman BYRD. Maintenance would be reduced $3.5 million? Matching grants, $3 million, and numerous smaller cuts. These are sharp reductions.

Are you comfortable with these reductions?

Mr. ROBINSON. Mr. Chairman, the administration's policy on State grants and it certainly applies to this one, is that State grants are to act as seed money to get a program going. These programs generate interest on the part of the States in that activity, and Federal involvement is terminated at some point when there is State interest shown in continued program support.

We are at that point in many of these programs. Certainly, if we had our druthers, we would like to continue these grant programs. But, at the same time, we think there has been, particularly in the endangered species program, significant interest and participation at the State level.

I think that funding provided for those State grants up to this point has spurred State involvement and has achieved what the administration wanted.

It is the administration's policy to terminate those programs and leave them to the States.

Chairman BYRD. You're talking about one item. What about the others? Are you comfortable with that? The other reductions?

Mr. ROBINSON. I think, Mr. Chairman, we can live with them. We can work with the States.

FISCAL YEAR 1990 BUDGET REQUEST

Chairman BYRD. Was your original request to the Department this long in regard to all the items?

Mr. ROBINSON. No, sir; it was not.

Chairman BYRD. In other words, the savings are not self-imposed? Not self-imposed because you have devised new ways to accomplish your resource management responsibilities more efficiently.

Mr. ROBINSON. Yes, sir; that is correct.

Chairman BYRD. How much was the original—you were going to say——

Mr. ROBINSON. I was going to say that we have become innovative.

Chairman BYRD. That innovative?

Mr. ROBINSON. As I said, to a point——

Chairman BYRD. You may have set a standard that is difficult to live up to in the future.

Mr. ROBINSON. I understand it will be difficult, yes, sir.

Chairman BYRD. The original request to the Department was how much higher?

Mr. ROBINSON. Mr. Gerst?

Mr. GERST. In the enhancement area, the request to the Department was some $4.8 million higher than the request to OMB.

Chairman BYRD. And the overall request?

Mr. GERST. The total request to the Department was approximately $21 million higher than the request to OMB.

Chairman BYRD. It wasn't $31 million?

Mr. GERST. Not according to the numbers I have here. Now, that represents our request to OMB. There was a subsequent reduction between the request to OMB and what ultimately ended up in the President's budget.

Chairman BYRD. What was the original request to the Department?

Mr. GERST. To answer your question another way, the difference between the request to the Department and the request to OMB was about $21 million. The original request to the Department for resource management totaled $373,098,000.

Chairman BYRD. And to OMB?

Mr. GERST. The request to OMB was $351,724,000. And the request to Congress was $342,042,000.

Chairman BYRD. Senator McClure, would you like to inject some questions at this point?

ENDANGERED SPECIES

Senator MCCLURE. Thank you very much, Mr. Chairman.

This is one of the most difficult hearings for me personally because I've got enough questions to last us all afternoon. This is a way of confessing what you and I know to be true, and that is that your activities cover a whole host of areas that are of great interest to all of us. It is hard to narrow down a list of interests and specific questions which ought to be highlighted.

Both you and I are subject to attempts to summarize a whole series of questions. I hate to put myself in that position, and I don't intend to put you in that position either; however, there are some areas that I wish to highlight here today, and I will submit the balance of my questions for response in writing.

One of the areas of great difficulty for both of us has to do with the administration of the Endangered Species Act.

One of the amendments to the act last year now requires public comment for communities impacted by the listing of the species.

How have you incorporated this requirement into your process?

ENDANGERED SPECIES ACT

Mr. Robinson. Senator, I would like to ask Ralph Morgenweck, our Assistant Director for Fish and Wildlife Enhancement, to tell you what his people have been doing. I know there have been a couple of meetings held just within the last couple of weeks to address that amendment and all amendments that came out of the 1988 act.

So, Dr. Morgenweck.

Dr. Morgenweck. The requirement to get public involvement in the recovery planning process really changes the scope of three things that we are doing.

One change we have made is that when the recovery plan is in draft, we are seeking to notify the impacted parties individually or as a group.

In addition, we are taking out articles or ads in newspapers letting people know that the draft is available for review and for comment. In most cases, we will also put a notice in the Federal Register, again, inviting public comment on the document before the document is finalized.

Senator McClure. Do you have a track record so far as to how well that is working?

Dr. Morgenweck. Our track record is not very complete yet because this is the first year and we're not quite midway through the year. So, we have not established much of a track record yet.

Senator McClure. Another amendment required a report on the cost of recovery plan by species. Are adequate funds requested in your fiscal year 1990 request to comply with that amendment?

ENDANGERED SPECIES REPORTING

Dr. Morgenweck. We will be able to produce such a report. What we are trying to do is to contact all of the States that receive section 6 funding and, by adding up their matching funds, we are able to come up with an estimate of costs for the States. We are also contacting the various Federal agencies that are involved for a compilation of their costs, as well.

Senator McClure. Do you have enough funds to complete that activity in fiscal year 1990?

Dr. Morgenweck. We estimate that the total cost for implementation of the amendments will be about $700,000. This fiscal year we did request money from the Department for this, but it didn't make it through the system.

We will be getting the report done within existing funds.

Senator McCLURE. So you will take it away from some other activity in order to get that done?

Dr. MORGENWECK. That is correct. We will get it done.

Senator McCLURE. You will get it done, even though you don't have the money directly.

Dr. MORGENWECK. That is correct.

Senator McCLURE. The traditional species-by-species approach to management of endangered species focuses large amounts of money into a few high-profile species, while the status of other species continues to decline.

Some say that the future management of species should be directed toward maintaining biological diversity; with the additional funds provided in fiscal 1989, the Service initiated development of a new technique for identifying and mapping areas of high species richness.

Can you elaborate on this technique and where you stand on its development?

Dr. MORGENWECK. We have had some involvement, however, that has largely been a research operation.

Mr. ROBINSON. I would defer to Mr. Smith, who is the Regional Director for Research and Development.

BIOLOGICAL DIVERSITY

Mr. SMITH. It is true that Congress added $300,000 to the budget in 1989 to work on species richness. This work is being done at Idaho State University. Areas in Idaho and Oregon are being mapped to determine the species that are present and the habitats. These maps will be compared to the protected habitats to determine whether the habitats need to be protected for the species concerned.

The work has been contracted out, and it is in progress. The results are not in yet. The issue of whether you protect one species versus many has not been addressed.

Senator McCLURE. It is not being addressed?

Mr. SMITH. It is not being addressed at the moment.

Senator McCLURE. Should it be?

Mr. SMITH. It is a matter of opinion. I personally think it should be.

Senator McCLURE. How do we get there?

Mr. SMITH. We expand what we're doing in Idaho and Oregon. The next step would be to do that—I made a mistake. The work is being done at the University of Idaho, not Idaho State.

Senator McCLURE. I knew what you meant. [Laughter.]

Mr. SMITH. The university at Moscow.

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

Senator McCLURE. That's correct.

The one that just won the Big Sky Conference.

In fiscal year 1989, $200,000 was provided for the implementation of the North American waterfowl management plan. This plan, an historic high-level agreement between the United States and Canada, is designed to restore North America's waterfowl populations, principally through habitat conservation.

According to the plan, the Service will work with States, other Federal entities and nongovernment organizations to protect and manage habitats in six key geographic areas.

For fiscal year 1990, you requested $2.6 million for the implementation of the plan. Yet, no FTE's are requested for these funds. That seems to be a very large increase in funds if you have no increase in personnel.

Can you effectively spend $2.6 million for this in fiscal year 1990?

Mr. ROBINSON. I will ask Mr. Gerst to go into the FTE part and then pass it on to Harvey Nelson, the North American waterfowl management plan coordinator.

WETLANDS CONSERVATION

Mr. GERST. Let me go into the major parts of the North American plan. $2.4 million of the North American plan is to support the joint venture coordinators and associated staff. So there are some FTE's needed there.

It is also for the development of implementation plans and international coordination for Mexico and Canada and the development of surveys and monitoring tools for joint venture guidance and assessment.

There is another portion of the North American plan, the wetlands conservation portion of $1.3 million. This will be used to support on-the-ground wetland enhancement activities, management of flagship project areas in coordination with State and private entities, extension activities, and other outreach programs.

There are additional details that some of the other witnesses here may be able to provide about specific joint ventures.

I would like to defer to Harvey Nelson, the Director of the North American waterfowl management plan, for an additional discussion on that. He will give you an overview on the plan.

Senator MCCLURE. Let me give you a specific question on that before you defer the balance to others.

Would it be appropriate to assume that if you have requested no FTE's for the expansion of these activities, that you are planning to borrow or use FTE's from some other activity?

PLAN IMPLEMENTATION

Mr. GERST. That is a possible solution. But, in addition to that, in the current negotiations with the Department and OMB, we would hope that there is another opportunity to revisit the FTE question.

Although it is true that at this time we have not requested FTE's for the North American plan, we have identified FTE requirements for implementation. We would hope that there are other opportunities to revisit this matter with the administration.

Absent that, we would attempt to cover this from the lapse of FTE's.

Senator MCCLURE. You will get it from somewhere else if you can't get an increase?

Mr. **Gerst**. We will try to get it from somewhere else if we can't get an increase.

Senator **McClure**. I want to go back over that just a moment because you went over that pretty fast.

You said we're going to try to get it somewhere else. That means either you get it somewhere else or you don't do the activity. You've got three choices, don't you? You get the FTE's from someplace else. You get them out of an increase in the ceiling. Or, you don't do the program.

Mr. **Gerst**. We will be attempting to get additional ceilings for the Fish and Wildlife Service in negotiations with the Department and with OMB. If we are successful, then we have identified specific ceilings for implementation of the plan.

Senator **McClure**. And if you're not successful?

Mr. **Gerst**. Then we will attempt to carry out the program within the ceiling that is available in the Department, and we would seek assistance from the Department. If that were unavailable, then we would carry out our responsibilities within the ceiling available to the Fish and Wildlife Service. Using active management of the ceiling such as lapses, we would cover the FTE needs by not filling vacancies.

Senator **McClure**. How are you going to manage this program? How are you going to spend $2.6 million additional dollars?

Mr. **Nelson**. Senator, we spent the past year putting in place the structure to set up these six joint ventures in the different parts of the United States. We worked very closely with the States and other organizations in accomplishing that.

There is beginning to be some State money, and some private money coming in, in addition to what we have asked for which is needed to carry out coordination and implementation of joint ventures.

Hopefully, we can rely on support from others. But there is a limit as to how far we can do that.

Senator **McClure**. Would you please provide for the record a geographic distribution for the use of the funds?

Mr. **Robinson**. Yes; we will, Mr. Chairman.

Senator **McClure**. Mr. Chairman, I'm going to relinquish now, but I want them to know I've got a whole bunch of questions here on the Bruneau Hot Springs snail, just so that they won't be disappointed. [Laughter.]

Thank you very much, Mr. Chairman.

Chairman **Byrd**. Senator Bumpers.

[The information follows:]

GEOGRAPHIC DISTRIBUTION OF FUNDING FOR THE NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

The planned geographic distribution for the funding requested for the North American Waterfowl Management Plan in 1990 is as follows:

Activities supporting implementation of the North American Waterfowl Management Plan will be focused in the high priority habitat categories identified in the Plan.

Geographic area	*Funding*
Lower Mississippi Valley	$280,000
Prairie Pothole Region	280,000
Atlantic Coast, Great Lakes and St. Lawrence Valley	280,000

Geographic area	Funding
Central Valley, California	280,000
Mississippi/Gulf Coast	280,000
Twin Cities Regional Office Coordination	100,000
Subtotal	1,500,000

The Migratory Bird Management Office (a headquarters office with staff located at the Patuxent Wildlife Research Center, Laurel, Maryland) will undertake activities to improve data bases relating to distribution and abundance of nesting and wintering waterfowl in support of the Joint Ventures. A total of $900,000 is budgeted for these activities. The general geographic areas where they will be conducted include: Extensive survey and banding programs will be focused on the Prairie Pothole Region; and additional survey/banding programs in the Lower Mississippi Valley, Central Valley, and Atlantic Coast.

The funding for wetlands conservation activities will be used primarily in the 3 Joint Ventures that are the furthest along in development of Joint Venture plans, including:

Gulf Coast	$300,000
Lower Mississippi Valley	400,000
Prairie Pothole Region	600,000
Subtotal	1,300,000

FISCAL YEAR 1990 BUDGET REDUCTIONS

Senator **Bumpers**. Mr. Robinson, your Fish and Wildlife budget goes from $456 million this year to $360 million in 1990. Now, you are going to tell me when I ask you about fisheries that fisheries are going to be funded at level funding. And I will argue in a moment about that.

But, just for openers, how are you going to maintain Fish and Wildlife Service with that kind of a cut? Are you planning on tapping some funds that I don't know about?

Mr. **Robinson**. No, sir; we're not planning on tapping some funds. But one of the additions that the Department has spoken about, and that I talked about in my opening message to you, was the Land and Water Conservation Fund. The new initiative of the administration is in the order of $200 million for the land management agencies, of which our portion could be somewhere around $50 million.

Senator **Bumpers**. You're talking about land and water conservation funds? You're not going to get that. How much is in the Land and Water Conservation Fund this year?

Mr. **Robinson**. Approximately $57 million was appropriated last year.

LAND ACQUISITION

Senator **Bumpers**. How much was the total amount in the Land and Water Conservation Fund?

Mr. **Robinson**. I don't know that, Senator.

Mr. **Itteilag**. The unappropriated balance going into fiscal year 1990 is estimated to be in the range of $7 billion. That is accumulated over a long period of time, and it includes, for example, up to $900 million annually from Outer Continental Shelf oil and gas receipts.

And then, as compared to that balance, the amount appropriated by the Congress last year was $206 million.

So, that balance is continuing to build up.

Senator BUMPERS. That is what was available, $206 million.

Mr. ITTEILAG. That is what was appropriated.

Senator MCCLURE. Would you permit a correction to be made? No dollars move into the fund. Is that correct?

Mr. ITTEILAG. That is correct.

Senator MCCLURE. What you're talking about going into the fund is an entry on a ledger page.

Mr. ITTEILAG. It is a bookkeeping entry.

Senator MCCLURE. It is a bookkeeping entry with no money.

Mr. ITTEILAG. That is correct.

Senator BUMPERS. I never heard that figure before, Jim. All I know is that we never have any money in the Land and Water Conservation Fund every year. Reagan tried to zip it every year and we always managed to put a little money in it.

Senator MCCLURE. Let me correct that if I may, and I hope you won't take this out of his time.

Congress directed that the fund be established, and that fund would have authorized amounts taken out of the OCS revenues. However, this is a bookkeeping balance that never has any dollars in it.

The only dollars that are there is what is appropriated by the Congress each year for these activities.

So that we separate——

Senator BUMPERS. We put $206 million in it last year? Is that your recollection?

Senator MCCLURE. Yes; actually appropriated dollars, not the bookkeeping account.

Senator BUMPERS. Do we break that down—excuse this private conversation. Jim and I are on the Energy Committee where this melon is sliced.

Jim, do we separate in the appropriations that we make between BLM, Fish and Wildlife Service, and the National Park Service and the Forest Service, do we break down how much each one gets?

Senator MCCLURE. Yes, we do.

RESOURCE MANAGEMENT

Senator BUMPERS. How much was in fish and wildlife?

Now, getting back on track, you have that $96/94 million cut here in Fish and Wildlife Service, and you only had $57 million last year. You don't know what you're going to have yet in 1990.

Mr. ROBINSON. That is true. We don't know.

Senator BUMPERS. How are you going to operate this if we don't put some money in there for you? That's a 25-percent reduction in fish and wildlife.

Mr. ROBINSON. If the $57 million were appropriated again this year, that would drop our reduction down to about $40 million from——

Senator BUMPERS. A lot of inflation and your needs and everything, how are you going to operate with the $40 million cut in the Fish and Wildlife Service?

Mr. ROBINSON. We are going to——

Senator **Bumpers**. You're going to do it because OMB tells you to.

Mr. **Robinson**. We're going to operate very efficiently and with a lot of innovation. [Laughter.]

STUTTGART

Senator **Bumpers**. Efficiency has a lot of names. For example, let's take every year I have to do two things, Mr. Chairman; in the State, Justice, Commerce Appropriations Subcommittee, I have to save the Catfish Experimental Farm in Stuttgart, AR, and in this subcommittee I have to save the fish hatcheries in south Arkansas, which cost over $1 million. It produces $160 million in tourist revenues.

And now you are proposing to cut Mammoth Springs from this year's $182,000 to $154,000 and still produce the same number of fish we produced last year. And I want you to tell me how I'm supposed to tell the manager up there to do that.

Mr. **Robinson**. I will ask the Regional Director from the Southeast to tell you how he's going to do that, if I might.

Mr. **Pulliam**. If you would look at the field station listing in the back of the budget justifications, some of the maintenance funds we have do not show up in the field station listing. That's one part of the problem.

Senator **Bumpers**. I didn't understand that.

Mr. **Pulliam**. There are maintenance funds, $475,000 in the Southeast that have not been allocated and, therefore, are not reflected in the station breakout.

MAMMOTH SPRINGS

Senator **Bumpers**. You have a $20,000 allocation for maintenance at Mammoth Springs, but not for operations.

Mr. **Pulliam**. I'm not sure what you are referring to.

Senator **Bumpers**. You have asked, according to your budget, and that's what I'm reading from, you cut operations from $182,000 to $154,000. And you have $20,000 in addition to that for maintenance. I assume that is for construction and maintenance.

Mr. **Pulliam**. I think, regionwide, there's $475,000 unallocated. So, Mammoth Springs would get part of that.

Senator **Bumpers**. So you're going to give us in Arkansas the rest of that money?

Mr. **Pulliam**. Not all of it. Our fisheries budget is not as large as it was in fiscal year 1989.

Senator **Bumpers**. Two things. Let me ask you. Are you planning to tell most people down there—we went from 10-inch trout to 9-inch trout—are you going to tell them to produce an 8-inch trout next year?

FISH FOOD COSTS

Mr. **Pulliam**. In trout production, there is a lot of food cost involved. What has happened is that, last year, for example, fish food costs went up 37 percent. That lost us almost $150,000 last year.

If you couple that with the fact that the fisheries budget is smaller than it was last year, I don't have the funds this year to feed the same number of fish I had last year. I have two options. I can raise fewer fish or smaller fish.

I opted to raise smaller fish.

Another option is to talk to the States to see if the States would be willing to buy part of the fish food.

We advised Washington how we would handle it. We would let the State decide whether it wanted fewer or smaller fish.

Senator **Bumpers**. I don't want either one of those options.

Mr. **Pulliam**. I don't particularly like it either. But in the real world, when I have fewer dollars, I have to decide to cut something, and how to cope with the funding reduction.

What I'm telling you is that the decision I made was to raise smaller fish in Arkansas. Washington has advised me that we should produce the same size fish as we did last year. Somewhere the money will be provided to buy the fish food.

Senator **Bumpers**. But nobody told you where the somewhere was?

Mr. **Pulliam**. Not yet.

Senator **Bumpers**. Frank Dunkle assured me about 1 month ago that a directive that went out from Fish and Wildlife Service on cutting back on the food bill—it has gone from 16 cents a pound to 23 cents a pound, so a directive went out in Fish and Wildlife Service to cut back 25 percent on the amount of food bought.

Now, as you say, that just meant one thing. Fewer fish or smaller fish. He promised me that that directive would not be carried out in the fiscal year 1989.

Can you tell me that now?

Mr. **Pulliam**. I have been told to raise the same size fish.

TROUT HATCHERIES

Senator **Bumpers**. I'm worried about 1990 and I'm going to try my best to find the money for you. But I just want to get this straight. We're not going to just start moving down to 8-inch fish.

I have made this argument so many times in here. Everybody in Fish and Wildlife Service ought to know:

Do not tinker with Mammoth Springs. That is an extremely important part of our whole economy—tourism is No. 2 on our economy, and those three trout hatcheries up there produce $160 million a year in tourist revenues in Arkansas.

Now, to save a few tens of thousands of dollars and destroy that kind of an industry is the height of silliness.

Now, finally, Mr. Chairman, just one other question.

On ANWR, I am amazed that you are asking for money to do some studies on the impact of ANWR on migratory birds, fisheries, and so on.

What in the world? We've been talking about opening ANWR now for 2 or 3—at least 3 years, and really since—Jim, I defer to you. When did we first start this study? Eighty-one?

ARCTIC NATIONAL WILDLIFE REFUGE

Senator **McClure**. Yes.

Senator **Bumpers**. Why is the Fish and Wildlife Service just now getting around to asking for money to do these studies? I can't believe we're up there voting on opening those and you don't know what the impact is going to be.

Mr. **Robinson**. Senator, I think it is clear that we have a lot more to learn on ANWR. I know it has been a long time and we have been involved in studies there awhile, but I can guarantee that there is a great deal more to learn.

I will ask the Regional Director for Alaska to elaborate on the studies.

Senator **Bumpers**. Why are we just now getting around to asking for money to do a study that should have been done long since?

I can't imagine the Interior Department insisting on the opening of that wildlife preserve, refuge, and this study not having already been done.

Mr. **Robinson**. I will defer to Mr. Stieglitz.

Mr. **Stieglitz**. I would answer that by saying we have a considerable amount of biological data collected. We conducted 5 years of extensive baseline studies leading up to the 1002 report. Subsequent to submission of the Secretary's recommendation to the Congress, we have increased the amount of effort we have been putting into gaining biological information.

In fiscal year 1988 and again in fiscal year 1989, we are investing about $3.5 million in investigations with the idea being that while we obtained good, solid baseline information during the 5 years leading up to the report, there are still information needs that we think are important to fill before and if we get to a formal opening of the area.

The additional funds that we have asked for in fiscal year 1990 are to complete funding in two areas, fisheries both near shore and in fresh water, and for a closer examination of the near shore lagoon areas, looking at the migratory bird values of those areas. The idea is that, ultimately, there will probably be some development of those lagoon areas and we want to know what species are there and what numbers, when they are there and so forth.

So, if we do get to the opening stage, we will be able to minimize impacts on the species involved.

MIGRATORY BIRDS

Senator **Bumpers**. I thank you for that explanation. Of course, as you know, one of the really biggest environmental problems of opening that refuge is water and where it's coming from.

And certainly it is going to have an impact on the migratory bird population and the nesting areas, and so on, I think. I don't know. I can tell you that bill is going to come sailing out of the Energy Committee in about 2 weeks, at 90 miles an hour. And here we haven't done these studies, and I'm really surprised that they have not been done.

Thank you, Mr. Chairman.

Chairman **Byrd**. Senator Stevens.

Senator **Stevens**. Mr. Chairman, I have a little statement to make, but I would be happy to assist the Senator from Arkansas up our way. We would be happy to buy those 8-inch fish and use them for bait. [Laughter.]

And we would be pleased to stop some of these studies. If you would just open up ANWR, you'd have about 4 million more to do things in the south forty.

Senator **Bumpers**. We will open ANWR and you can bring all of those salmon.

Senator **Stevens**. We asked $2,250,000 in 1990 for the studies going on, primarily to answer questions people have been raising about what's going on in ANWR. As a matter of fact, we don't have a problem with water during the time that migratory waterfowl is there. It is totally ponded during that period. It is the permanent residence species that need the water. When the migratory waterfowl is all over the place, I would be happy to take you in there.

Senator **Bumpers**. I have been there.

Senator **Stevens**. We would be happy to—[Laughter]—help you with those fish.

Senator **Bumpers**. I appreciate that. When we mark this bill up, I will remember those kind words. [Laughter.]

Senator **Stevens**. If you don't want to sell them, you shouldn't produce them, Mr. Chairman.

PREPARED STATEMENT OF SENATOR STEVENS

I want to make a slight statement here because it reflects a little bit on what Senator Bumpers was saying. I would ask that you print this whole statement in the record.

Chairman **Byrd**. It will be done.

[The statement follows:]

Statement of Senator Ted Stevens

Chairman Byrd, Senator McClure, thank you for the opportunity to comment on the President's budget request for the Fish and Wildlife Service.

With enactment of the Alaska Lands Act in 1980, nine new wildlife refuges were added to the National Wildlife Refuge System in Alaska and land was added to seven existing Alaska refuges. Alaska now has over 77 million acres of refuge lands—an area equivalent in size to four West Virginias, Mr. Chairman, and an area one and a half times the size of Idaho.

Alaska's 16 refuges are larger than the combined acreage of the 11 States of Connecticut, Delaware, Hawaii, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Vermont, Virginia, and West Virginia.

But although Alaska has over 85 percent of the nation's refuge lands, under the President's budget request we would get only 8 percent of the budget for fish and wildlife enhancement, refuges and wildlife, fisheries, and research and administration.

Alaska has been the stepchild in the Department of the Interior's budget process since the Lands Act was enacted. It's only been with the help of my good friends Chairman Byrd and Senator McClure, the Ranking Member of this Subcommittee, that we have been able to mitigate this inequity.

Mr. Chairman, despite the limited resources Alaska has been given to work with, I am very proud of some of the accomplishments that have been made. Last year with your leadership and Senator McClure's help, $650,000 was added to the budget for migratory bird research and management.

For almost a decade the populations of black brandt, Pacific white-fronted geese, cacklers, and emperor geese was plummeting downward. Through your efforts and those of Walt Stieglitz, our regional director, and many dedicated biologists and wildlife managers in Alaska, these species are beginning to recover.

This goose education program which includes a conservation curriculum taught in Eskimo village schools has been a tremendous success in changing attitudes and hunting practices that have prevailed for hundreds of years.

The add-on also included funding to study pintail ducks. Because of the drought, over 1.5 million pintails—60 percent of the nation's total population—nested in Alaska last summer. The funds are being used to determine the factors that contribute to nesting success so we can enhance that success both in Alaska and elsewhere.

Although the President did not request funding for these waterfowl programs this year, I hope this Subcommittee will agree to continue them. We are just beginning to reap the benefits of these initiatives.

Although the jury is still out on the long-term success of Alaska's waterfowl conservation program, great progress has been made in restoring the Aleutian Canada goose. Last year the Senate identified this species as a high priority for recovery action, and I'm pleased to report that the geese are in the process of being taken off the endangered species list and placed on the threatened list. I am told that if all goes as planned, the Service expects to take the birds off the threatened list in a very short time.

Another initiative this Subcommittee has supported over the years is Alaska's marine mammal research program which studies walrus, sea otters, and polar bears. According to 1985 census data, sea otter and walrus populations are near their all-time historic high levels while polar bear populations remain stable.

Despite the fact that fiscal year 1990 is the year in which the quintennial population censuses are scheduled to be conducted in cooperation with the Soviet Union, the Service proposes a $650,000 reduction in funding. If we are to have a good handle on the ecology of these magnificent creatures and understand the trends in their populations, this census work must not be postponed. Delay would also put the United States in breach of an international agreement with the Soviet Union—a precedent I don't think we ought to establish.

Although I am very excited about the great accomplishments we've had in protecting wildlife and waterfowl in Alaska over the past year, my enthusiasm is somewhat tempered by the disastrous fire year we had. It's a little known fact that more park and refuge land burned in Alaska last summer than in all of Yellowstone and the rest of the country combined.

Over 1.5 million acres burned to the ground in Alaska's refuges alone. Suppression efforts cost over $20 million. This year I hope to seek a small add-on for prescribed burns in areas of particularly high fuel load to minimize the risk of uncontrollable conflagrations. The money would also be used to study the effect of fires on fur animals and caribou populations and to install remote weather sensing equipment that can report lightning strikes, the major cause of fires in Alaska.

Finally, Mr. Chairman, I'd like to comment on an item of great importance to the State of Alaska and to subsistence hunters throughout the State. The Alaska Lands Act authorized the State of Alaska to take over management of fish and game on Federal lands, but it provided a mechanism to reimburse the State for the costs of administering what would normally be a Federal responsibility. The law directs the Secretary to reimburse the State for up to 50 percent of its expenses in administering the subsistence hunting program.

I must take issue with the Service's statement on page 88 of its budget justification that "further Federal funding is not essential for continuance of this grant program." The Fish and Wildlife Service seems to be under the mistaken impression that this is a grant program. It is not.

I hope my colleagues will join me in ensuring that the United States lives up to its end of the bargain struck in the Alaska Lands Act by providing full reimbursement of State expenses as directed by law.

Mr. Chairman, I have a series of questions that I would like to submit for the record. Thank you for your courtesy in allowing me to comment on the Fish and Wildlife Service budget.

REFUGE LANDS

Senator **Stevens**. I don't see any reason to belabor all of these questions here. We have now a total of 85 percent of the refuge lands, wildlife refuge lands in the United States. It's in my State we had 77 million acres of land equivalent to four times the size of your State, Mr. Chairman, 1½ times the size of Idaho.

In the last act, the 1980 act, which you were kind enough to work with us on, 16 wildlife refuges we have now in the State of Alaska, are larger than the combined acreage of Connecticut, Delaware, Hawaii, Maryland, Massachusetts, New Hampshire, New

Jersey, Rhode Island, Vermont, Virginia, and West Virginia all put together.

And with all of those refuges and all of that land, 85 percent of the total land, 80 percent of this budget would go to Alaska and we really see these lands now the stepchild really of the Department of the Interior. We are forbidden really from dealing with these lands ourselves. We used to do a much better job when they were under State jurisdiction or even when we were a territory and we had a territorial government than the Federal Government now does within the exclusive province of the Federal Government.

The two of you, Senator Byrd and Senator McClure, have been kind in trying to help us work out some of these problems, but I think they are getting very acute now.

We have had some progress in terms of the Canadian goose, the Aleutian-Canada goose, I should say. But we have got a real serious problem now on the pintails. I understand we lost 60 percent of the pintails nationally.

We believe that we could enhance the reproduction of those pintails in Alaska if consideration was given to Alaska to restore the wildlife population.

Sea otters, walrus are now at an all-time low historic level primarily because of the ban on the taking of them rather than any kind of a management process going on concerning them.

We have some increased funding here in some areas, but we have a reduction now of $650,000 in the cooperative studies with the Soviet Union. We do share some of these species with the Soviet Union.

This last year, while there were fires in the south 48 that got a great deal of attention, 1½ million acres of Alaska burned. More than three-fourths of all land burned by fire in the country last year. Despite the terrible fire in your area, Senator McClure, we had them, and we believe that with the slightly increased funding. we can prevent those fires.

It had a real substantial impact on our wildlife population in my opinion and I would really like to see some changes made. One of the most difficult things I have with the budget this year is that the recommendation of the Service that further Federal funding is not essential for the continuation of the subsistence management program that was required by the Congress in the 1980 act, it really—those were quotes from the Service. It is not a grant program. It is a program that is mandated by Congress.

And under that act, the State of Alaska is required to pay one-half of the expenses of that program, but it is not a grant program. And I just can't understand why that program has been categorized as a grant program and terminated in this budget.

It is the program that permits the management of subsistence hunting activities primarily for the Native people of Alaska. And I think that is a real wrong to have it excluded.

ALASKA REFUGES

Mr. Chairman, rather than belabor your time and Senator McClure's time, I have a series of questions. I might say that it looks a little bit long, but you should have seen it before I crossed out those that I considered not really essential.

But I would like to have answers to them, and I would like to have an opportunity to go over these things with the chairman and ranking member at the time of markup because I think that really the difficulty is that if we continue to ignore these refuge lands, their productivity is going to decline and it is going to have a significant impact on the waterfowl population of the south 48 if we do.

It is not possible for us to countenance putting away so much of Alaska's land and then totally ignoring it, the management and the necessities for that land if they are to remain productive as far as fish and wildlife resources are concerned.

I thank you for your time and I would ask that this statement in full be printed, and my questions be submitted for response.

Chairman BYRD. We appreciate prompt responses to the questions.

REFUGE REVENUE SHARING

Senator Burdick.

Senator BURDICK. Thank you, Mr. Chairman. My understanding is that the President's budget for the Fish and Wildlife Service provided for fiscal year 1990 provides only about 60 percent of the funding that it was obligated to provide under the Revenue-Sharing Act.

Is that correct?

Mr. ROBINSON. That is true, Senator, yes.

Senator BURDICK. Can you explain why the Fish and Wildlife Service provides only 60 percent of what it owes the counties, when the Bureau of Land Management, a sister Interior Department agency, made full payments under its program?

Mr. ROBINSON. I will ask Mr. Gerst to go over how we received those funds.

Mr. GERST. Let me briefly go over the sources of the funds that add up to the 60 percent. We are estimating that $3,590,000 will be available in receipts carried forward and we are seeking appropriations of $6,645,000 for a total of $10,235,000.

You are correct that this is equal to approximately 60 percent of full entitlement. However, within available targets for funding, the Service made an effort to reach full payments to counties.

The Service Director does support and has been on record supporting 100 percent payment. Less than 100 percent payment causes operational difficulties, and we have certain counties that are refusing to honor acquisition agreements because there is less than full entitlement.

But, within funding targets allocated to the Service and the Department, 60 percent was the percentage that resulted from the funding level that was agreed upon.

Senator BURDICK. When this land was taken, there was no such compromise. It was supposed to have been paid for the loss of revenue.

Was that the understanding?

Mr. **Gerst**. Yes; it was. The original legislation does authorize full compensation. The last year that there was full compensation was about 1980, I believe.

Senator **Burdick**. Since 1980, they have been violating the agreement then.

PAYMENTS TO COUNTIES

Mr. **Robinson**. There is no question that this is one of the biggest problems we face in dealing with landowners in your State and in other places. It is hard to be a good neighbor when you have to deal with these funding figures. But, we have been dealing with them for the last 7 years, and I think we can continue to do it.

Senator **Burdick**. In other words, you've got by with it for 6 or 7 years, so, therefore, you will get by with it another 6 or 7 years and the county commissioners just have that much less for taking care of their responsibilities.

Mr. **Robinson**. That is the way it works out.

Mr. **Bumpers**. And that's fair?

Mr. **Robinson**. I don't know about the fairness of it. I know about the reality.

Senator **Burdick**. I know something about the fairness and reality both. I don't think it is a bit fair nor is it realistic.

You asked the county that is having a struggle out there in the heartland of this country to pay, then they only get 60 percent of the 100 percent they usually were getting, and you say that's the way it's going to continue?

Mr. **Robinson**. Yes, sir; I understand it is a problem.

Senator **Burdick**. In North Dakota, South Dakota, Minnesota, all purchases by the Fish and Wildlife Service must be approved by the county commission before the Governor will give approval. There are now 24 counties in these States, one-half of them in North Dakota, that have told the Service they will not provide or approve acquisitions unless full refuge revenue-sharing payments are made.

And, yet, according to the Interior Department's North American waterfowl management plan, our States contain the critical U.S. breeding habitats for ducks.

What effects will the Service's continuing failure to make full payment to counties have on meeting the goals of maintaining the duck population?

Mr. **Robinson**. I will refer that question to our Regional Director, Galen Buterbaugh.

Mr. **Buterbaugh**. If the counties will not approve fee acquisition, we will spend more of the funding on easements and other such mechanisms in order to meet the goals of the North American plan. We will just not be doing it with fee acquisition.

Senator **Burdick**. Would it be better to pay 100 percent now?

Mr. **Buterbaugh**. We would prefer that.

Senator **Burdick**. I would, too. And I hope this committee does. Thank you.

Chairman **Byrd**. Thank you, Senator Burdick.

Senator Domenici.

1990 BUDGET FRAMEWORK

Senator **Domenici**. Thank you very much, Mr. Chairman. I have only three areas that I want to ask about that have some impact in my State, and I will do that as quickly as I can.

I would like to ask Mr. Robinson and his staff for purposes of comparing budgets how much is the budget you are portraying as the administration's request? Am I correct in my understanding that it is the Reagan budget request?

Mr. **Robinson**. Yes, sir; it would be the administration's budget, with some additions.

Senator **Domenici**. The additions you speak of would be the few changes that were specified in the Bush budget submission.

Mr. **Robinson**. I want to make it clear, Senator—I don't mean to interrupt, but we are presenting this as President Bush's budget, and we are defending it as such. But the changes that are here are very slight in most cases.

Senator **Domenici**. I understand.

As I understand it, the Bush budget proposal for the majority of discretionary domestic accounts, where he did not specify increases or decreases, are subject to a freeze. This series of programs has been referred to as the black box. What it really means is that the residual domestic discretionary programs are subject to an overall freeze on outlays.

For your presentation to the committees, however, the Director of OMB has informed you that for lack of detail, while negotiating with Congress, you are to assume that Ronald Reagan's budget and his line-item proposals are in effect.

For the most part, that is what you were talking about with the distinguished chairman when you spoke of specific program proposals.

Is that not correct?

Mr. **Robinson**. Yes, sir.

BUDGET AUTHORITY

Senator **Domenici**. Having established that background, how much does your overall budget go up or down year over year, fiscal year 1989 versus fiscal year 1990, for both budget authority and outlays?

Do you have the figures for what spending was in fiscal year 1989 and what the sum total of spending would be in fiscal year 1990 under the administration's budget request?

Ms. **Tynan**. Senator, our total 1989 enacted level, is that what you are asking?

Senator **Domenici**. Enacted level, correct.

Ms. **Tynan**. It was $811 million. That included our permanents and trusts and $457 million in appropriations.

The 1990 level that we are seeking is roughly $361 million in appropriations, or $606 million in total, including permanents and trusts.

Senator **Domenici**. Is that budget authority or outlays?

Ms. **Tynan**. Budget authority.

Senator **Domenici**. Do you use outlays in your estimating or do you still use programmatic levels instead of outlays?

Ms. TYNAN. We use budget authority.

Senator DOMENICI. So you don't work off of the comparable outlay numbers? Do you happen to know what the outlay numbers are?

Don't take a lot of time, because the chairman has many questions.

Ms. TYNAN. I don't have my outlay numbers handy, but I can provide them.

Senator DOMENICI. The point I was going to make, Mr. Chairman—and this will be good enough, although not as accurate as I would like—is that if you were at $457 million in budget authority, and some comparable outlay level, and you reduce budget authority to $361 million and some comparable outlay level, the truth of the matter is that the Bush budget recommends that the discretionary domestic accounts funded by the Federal Government would increase by 3 percent overall from fiscal year 1989 to fiscal year 1990.

So, if you take the outlays for fiscal year 1989 versus the outlays for fiscal year 1990 with the President's additions, his subtractions, and his overall freeze spending for domestic discretionary programs will increase by 3 percent.

That means, as I understand it, that it is up to this committee, this chairman, and this Congress to set some priorities. Under the administration's budget request, this agency would take a rather inordinate hit, however, it will be up to this committee to decide which accounts will be increased and which accounts must be reduced to stay within the total spending allowed under the Balanced Budget Act.

I don't think, in our questioning about the fiscal year 1990 budget proposals, that we assume that Congress is going to follow it as far as the 302(b) allocations to each of the 13 subcommittees is concerned.

In my opinion, this agency is an important activity that ought to be funded. I think there is latitude since the overall budget request for domestic discretionary spending increases by 3 percent, and your agency budget decreases by I'd guess at least 5 or 6 or 7 percent. Would you say that?

Ms. TYNAN. Yes, sir; at least.

MIDDLE RIO GRANDE

Senator DOMENICI. Now let me turn to specific programs. First, Mr. Robinson, I thank you for bringing the Southwest Regional Director, Michael Spear, with you today. I have no questions of him, but I would say to you that we have a rather fantastic conservation proposal for New Mexico called the Middle Rio Grande research proposal. It is an important preservation effort for one of the few remaining bosque habitats in the Nation, and I compliment him for his joint authorship of this research proposal. Last year, while this subcommittee helped our State with a number of things, it was unable to accommodate $500,000 to begin to implement this preservation plan.

It will take about $4.6 million over 10 years to survey and begin to regenerate and preserve the bosque habitat along the Middle Rio

Grande River. It has very, very old cottonwood trees that have stopped regenerating to put a major riparian habitat that supports large numbers of bird species and endangered species at risk. We need to regenerate and preserve the bosque.

I will do what I can to support this proposal. I don't know if the subcommittee will have enough money for the $500,000 to get it started, but I think it is beyond regional significance, and I compliment your Regional Director for his work on this proposal.

Mr. ROBINSON. Thank you, sir.

INDIAN HATCHERIES

Senator DOMENICI. On fish hatcheries, and in particular Indian fish hatcheries, this subcommittee has had a general discussion about their hatcheries management over the past 2 years. I would like to address a couple of questions to your hatchery experts if I might.

It has come to this subcommittee's attention, and the chairman has been very helpful, that Indian self-determination does not necessarily mean that we ought to turn back the operation of the Indian fish hatcheries to BIA. As a matter of fact, we can be more effective in maintaining and operating them if we train the Indian people to run them.

Last year, this subcommittee decided that they would help us with that approach. In particular, we sought such treatment for the Mescalaro fish hatchery in New Mexico in each of the past 2 years. With the help of Chairman Byrd and Ranking Member McClure, the Fish and Wildlife Service was directed last year in report language to fund, and I quote: "Both BIA hatcheries and fishery assistance offices, until changed by the committee."

I want to ask if you professionally concur that we would do a better job with some of these hatcheries, including the one at Mescalaro, if we continued to operate them through the Service and try to train our Indian people in fisheries management rather than turning hatchery operations over to the BIA.

Does somebody have an opinion on that?

Mr. ROBINSON. I will pass this question on to Gary Edwards, our Assistant Director for Fisheries, but I would like to make an overall comment about that.

I know the tortured negotiations that went on to reach that agreement, and we appreciate your help on it last year. It was the Department's feeling that the need for self-determination outweighed the expertise that our agency might be able to lend if we kept control of the hatcheries within the Fish and Wildlife Service.

I think, if you ask any professional at the table here their druthers as to whether we would rather operate the hatcheries ourselves, the answer would be yes. They would. But I think there is also a larger question that the Department looked at and they thought, as you stated, that self-determination was important enough that the administration for these hatcheries be placed with BIA. And that is the rationale for it.

I would ask very quickly, if I might, Mr. Chairman, to have an elaboration from Gary Edwards on that, if you care to hear it.

HATCHERY ADMINISTRATION

Mr. **Edwards**. Just to support what Mr. Robinson said, from a professional standpoint, the Service feels that we can do what we do best. Although we have gotten by over the years switching back and forth as to who funds them, from an efficiency standpoint, I think we can make the argument that it would probably be much better that they remain within the Fish and Wildlife Service. There are efficiencies to be gained, particularly administrative, because you have two agencies that are taking some money off the top to administer the program.

Also, one of the things that we have not been able to address is the maintenance of those facilities, because there has never been money that had been originally transferred over to the BIA to accommodate and maintain the facilities in a satisfactory manner.

Senator **Domenici**. My concern is that we will expect more of the Indian tribes and Pueblos than they can deliver. If we are going to go on with self-determination, it is our responsibility to make sure we're not asking them to operate and maintain their hatcheries without sufficient resources. I fear that we will blame them for not running them, even under your direction, as well as they could. I will submit specific questions on whether you think they can be maintained under the proposals in the budget request.

Finally, this subcommittee again decided, Mr. Robinson, to go ahead with some new fishery and wildlife cooperative research units. Some people wanted them line-itemed, as I did. We didn't win, but, in losing, I won anyway, because New Mexico State University was successful in the competition, and a new unit was set up there.

The funding was made available in the fiscal year 1988 continuing resolution with the help of the chairman and ranking member, who saw this as a worthwhile program.

I am concerned now about the status of those cooperative units. I would like you to give us a status report, at your convenience and consistent with the rules of this subcommittee, on the hiring of unit leaders and assistant unit leaders at the new units in New Mexico, Arkansas, South Carolina, Texas, Washington, and North Carolina.

We put increased money in the appropriations bill to start those cooperative research units, and I would like to know how they are operating. If you could provide that for the record, I could save the time now.

Thank you very much, Mr. Chairman.

Chairman **Byrd**. Thank you, Senator Domenici. You will supply the responses to the Senator's questions.

Mr. **Robinson**. Yes, Mr. Chairman.

[The information follows:]

Status of Cooperative Units

In response to a fiscal year 1989 Congressional increase of $500,000 which was provided for Cooperative Fish and Wildlife Research Units, the Service is in the process of staffing vacancies at new units in Arkansas, New Mexico, South Carolina, Texas, North Carolina and Washington.

The status of recruitment for these positions is as follows:

Arkansas.—The Unit Leader and Assistant Leaders for Fisheries and Wildlife are on-board.

North Carolina.—The Unit Leader and Assistant Leader—Fisheries are on-board. The recruitment for the Assistant Leader-Wildlife is in progress.

South Carolina.—The Unit Leader is on-board and recruitment for the two Assistant Leaders is in progress.

Texas.—The Unit Leader is on-board and recruitment for the two Assistant Leaders is imminent.

New Mexico.—The Leader will report in April, 1989.

Washington.—Candidates for the Leader are currently being interviewed and a selection is imminent.

LEETOWN FISHERY RESEARCH CENTER

Chairman Byrd. The Leetown Fishery is an important component of the Service. At Leetown, they are trying to increase striped bass culture and stocking techniques. And I'm sure you place a premium on this particular research.

Mr. Robinson. Yes.

Chairman Byrd. Is it necessary to continue the research?

Mr. Robinson. Yes.

Chairman Byrd. You are scheduled to complete renovations of the lower levels of the hatchery this April. These renovations will permit expanded and accelerated striped bass research.

You've indicated that striped bass research is important. Why at the very time that the striped bass research capability has been expanded, why does the fiscal year 1990 request cut the research back $300,000?

Mr. Robinson. Mr. Edwards—Mr. Smith.

Mr. Smith. To answer the question, we are not continuing the effort at the level of 1989; we cut it by $300,000.

Chairman Byrd. For what reason?

Mr. Smith. The resources are not adequate to do what we started to do in 1989.

Chairman Byrd. Couldn't you productively use the restoration of this $300,000, plus another $300,000 for striped bass research in fiscal year 1990, once the space in the Fisheries Academy becomes available?

Mr. Smith. Yes, sir.

STRIPED BASS RESEARCH

Chairman Byrd. It is my understanding that construction of nine one-half acre research ponds will be completed by the end of the year.

Wouldn't additional construction of a number of smaller, one-quarter acre ponds, permit greater flexibility for more thorough striped bass research?

Mr. Smith. The bids for the first construction package will be opened March 15. The contract to build will be let at the end of March. It should be completed by the end of this fiscal year or close to the beginning of the next fiscal year.

This will give us adequate ponds to do research. For better research, we need the smaller ponds that you mentioned.

That gives us an opportunity to replicate the studies, so the results of the research are more statistically sound.

Chairman BYRD. How many quarter-acre ponds would be useful and what would be their total cost?

Mr. SMITH. I think the number is roughly 10 to 12. We are talking about $3 to $3.5 million.

Chairman BYRD. In addition to striped bass studies at the laboratory, research on critical health and disease issues for striped bass was initiated at the fish health research this year. Is the immunization and genetic study work beneficial?

FISHERIES RESEARCH

Mr. SMITH. There are three efforts going on. One deals with striped bass, one deals with a new virus that is affecting the lake trout in one of the hatcheries, and the other deals with fish diseases in general. The work has been initiated in 1989; without the resources that were added into the budget in 1989, we won't be able to do as much as we did. We will not be able to do as much in 1990 as we did in 1989.

The budget right now with the add-on in 1989 is $966,000 for the disease work. With the reduction, we would have $766,000.

Chairman BYRD. Why is the add-on not contained in the budget request?

Mr. SMITH. The Department did not allow us to retain any of the additions by Congress in 1989.

Chairman BYRD. Is it correct that no congressional amendment was carried in the base for the fiscal year 1990 request?

Mr. SMITH. In research, none of the congressional add-ons were carried into the base.

MAINTENANCE NEEDS

Chairman BYRD. It seems that these deletions of congressional add-ons were a knee-jerk reaction with no thought given in the budget process that eliminated all congressional amendments.

Surely, many of the items have merit. And I intend to work for the restoration. It is my understanding that there are serious maintenance needs at the Leetown National Health Laboratory. Are there?

Mr. SMITH. That is a relative question. The appropriations for 1989 increased the maintenance amount at Leetown by $146,000. We have also had some maintenance money at the station. The maintenance money we had available, including the $146,000, is not adequate to cover all of the maintenance needs at Leetown, nor is it adequate to cover the maintenance needs of any unit in the Fish and Wildlife Service.

Chairman BYRD. Suppose you list for the record the maintenance needs at the Leetown laboratory. Why have you not requested in this budget $200,000 needed to make roof and wall repairs at the lab?

[The information follows:]

FISCAL YEAR 1990 MAINTENANCE NEEDS, NATIONAL FISHERIES RESEARCH CENTER—LEETOWN

Priority	Description	Amount
1	Replace electrical wiring [1]	$175,000
2	Replace oil furnance [1]	40,000
3	Replace electrical components [1]	31,900
4	Rehabilitation tank pad, National Research Laboratory	200,000
5	Replace tractor	45,000
6	Replace distribution truck	25,000
7	Replace fish tank	12,000
8	Replace solar tubes	90,000
9	Replace plumbing	10,300
	Total	629,200

[1] Health and safety related.

OZONE INJECTION SYSTEM

Mr. SMITH. The 1989 appropriation had an item of $300,000 for us to improve and fix the ozone injection system at Leetown. The true cost of that activity is close to $600,000. We are trying to make that difference up using some of the resources that were earmarked for repairs. And, in fact, we are saying that that is more important than the items that have been listed.

Chairman BYRD. In your list of needs, in which you also list the dollar requirements to meet those needs.

Mr. SMITH. Yes, sir.

Chairman BYRD. What about the repairs? The roof and wall repairs at the labs?

LABORATORY REPAIRS

Mr. SMITH. I think you're talking about where we have the tank area. That is, the outside area with tanks where we do studies, it is not completely enclosed. To get the maintenance up to where it was when it was originally constructed, it would cost about $200,000 to fix the roof, to fix the tiles, et cetera.

If you want to enclose that structure or that area and have a better site, it will cost more.

Chairman BYRD. How much more?

Mr. SMITH. The estimate I have is $1.5 million. I'm reluctant to give estimates because every time I do, they tend to be on the low side. But that is the estimate I have.

Chairman BYRD. If the money is provided, can you give assurance that the problem would be remedied promptly?

Mr. SMITH. I would try my best.

FISHERIES ACADEMY

Chairman BYRD. Now, as to the academy, we have discussed the expansion of the research program. And I note, in fact, that you are now budgeting for the academy under the Fisheries Program rather than under research, where it had been funded in the past.

Now, I am very interested in its continued successful operation of.

Does the academy continue to be a useful training facility for the Service?

Mr. **Robinson**. It does, Mr. Chairman. It has had increased usage over the last year. And the change in organization within the Service was done purely for efficiency. It did not affect the programmatic content. I will ask Gary Edwards to elaborate a little bit on what they have been doing out there, if I could.

Mr. **Edwards**. Mr. Chairman, I am aware as is Mr. Robinson that the academy has continued to expand its role in terms of internal as well as external technical training to assist States in meeting their training needs, particularly in the areas of fish culture and fish health.

FISHERIES TRAINING

Chairman **Byrd**. How many training hours is the facility designed to provide annually? And how many hours does it actually provide?

Mr. **Edwards**. We are anticipating this year somewhere around the neighborhood of 450 students. Some of those will go through the academy. In some cases, the academy will take the courses to the students.

For example, some of the courses are very long and very time-consuming. This year, we will have our 5 month fish health course and we will bring in people from our organizations and from the States to train them to be fish pathologists.

That is a 5-month resident course because of the intensity of the training. Twelve students will go through that course.

FISHERIES TRAINING NEEDS

Chairman **Byrd**. Are these significant fisheries training needs which, for lack of space and money, you are unable to provide to Service personnel and to personnel from other Federal agencies and from State agencies?

Mr. **Edwards**. Under the current level of training that we are providing, the funds are sufficient. If we would continue to expand and meet internal training needs, and also address more demands placed on us by the States, and other professional agencies, I would say the existing facility or size is not adequate.

Chairman **Byrd**. It is not adequate.

Mr. **Edwards**. If the program were to expand. It is certainly adequate under the current amount of training.

Chairman **Byrd**. If the needs go beyond the capabilities of the present academy, or the facilities.

Is that correct?

Mr. **Edwards**. In the area of training, particularly for career development, I think there is a considerable demand out there that is not being met through other training capabilities.

Chairman **Byrd**. If the training needs of the Service exceed the capabilities of the present academy building, and if the facility is already being pressed into use for research purposes, then perhaps we should consider alternatives.

I assume that any new training center should be near a major airport, since your students come from the entire country.

Is that correct?

Mr. **Edwards**. Yes, sir.

Chairman **Byrd**. Could there be benefits and possible savings by locating a new fisheries academy near the Park Service's facilities in Harper's Ferry?

Mr. **Edwards**. One of the reasons that it is located where it is, is to take advantage of the fish health lab that is right there. Most of our instructors are instructors from the Service. And there are certain advantages in doing that.

The Harper's Ferry site would certainly not be that far away, but we do use, for example, in the fish health course, a good deal of hands-on work over in the fish health lab.

AQUARIUM

Chairman **Byrd**. Does the Service presently operate a National Aquarium for fresh water species?

Mr. **Edwards**. No, sir; we at one time had the old National Aquarium located in the basement of the Commerce building. That was changed over, I believe, in 1983 or 1984. It is run by a private organization at this time.

Chairman **Byrd**. Wouldn't there be some substantial benefits if such an aquarium were established at a new training academy within a few miles of Harper's Ferry National Historical Park?

Mr. **Edwards**. I have never given that any thought, sir.

Chairman **Byrd**. Wouldn't an annual visitation of more than 1 million people to the park provide an excellent educational opportunity for the Fish and Wildlife Service?

What would you make of that idea?

Mr. **Edwards**. Not without giving it more thought.

Chairman **Byrd**. How long would it take you to give it a little more thought? [Laughter.]

Mr. **Edwards**. I would think certainly that it would benefit the visitors to that area.

Chairman **Byrd**. Are there other features not presently incorporated in the Fisheries Academy which could be useful in the new facility?

Mr. **Edwards**. Certainly. When we converted the lower portion of the academy to do the striped bass work, we lost both our wet lab and our dry lab capability.

Also, the old hatchery out there, from a teaching standpoint, probably is not adequate to provide the kind of teaching that we would like in the fish culture area.

FACILITY PLANNING

Chairman **Byrd**. What would be the initial planning cost for a new facility?

Mr. **Edwards**. I would not want to venture a guess of what that might be.

Chairman **Byrd**. What would you say the conceptual design would be, the cost? The conceptual design.

Mr. **Edwards**. I believe, in the capability statement that we provided to the committee, we identified $200,000 to assess exactly what the training need is, and then what would be required to meet that need.

Chairman Byrd. How quickly could a new training center be operational if you were furnished the funds?

Mr. Edwards. I would just guess, but I would doubt if one would be fully available before 1992.

Chairman Byrd. Would you provide this subcommittee with a schedule that would have all phases of planning and construction?

Mr. Edwards. Yes, sir.

[The information follows:]

FISHERIES ACADEMY AND AQUARIUM

COST ESTIMATE

The following information represents only tentative gross estimates of expected costs. Substantial revision/adjustment could be expected as planning proceeds.

Conceptual Plan for Academy and Aquarium—$400,000.

Fisheries Training Academy.—The general concept would include facilities to provide on-site technical fisheries training utilizing technical experts from throughout the Fish and Wildlife Service, other fishery agencies, and academia to serve the continuing education needs and professional development of fishery managers, biologists, technicians, and other workers in the Fish and Wildlife Service. Training would also be provided on a cost-reimbursable basis to other Federal and State agencies, the private aquaculture community, and foreign and international organizations.

Site acquisition; engineering planning and design	$2,030,000
Site grading and preparation	3,125,000
Training building and related facilities	7,140,000
Dormitory and related facilities	2,680,000
Total	14,975,000

Aquarium.—The general concept would include an aquarium and related interpretive facilities located on site with the academy that would emphasize the fresh water and anadromous fish resources of the United States. The objective would be to provide a high quality visitor experience for the general public that would serve to educate the public on the unique values and ecological requirements of these resources. Specific requirements and facilities needed to address the anticipated visitor load and the interpretive objectives would be developed in the conceptual plan along with construction cost estimates.

ESTIMATED SCHEDULE

The following tentative schedule is for the Fisheries Training Academy only. If the aquarium were to be built concurrently with the Fisheries Training Academy, an additional estimated 16 months would be needed for construction, making the cumulative time 62 months. Substantial revision/adjustment could be expected as planning proceeds.

	Months—	
	Time required	Cumulative time
A/E contract solicitation and award	8	8
Conceptual planning	4	12
Initial engineering design	6	[1] 18
Final engineering design	6	24
Solicit/award construction contract	4	28
Facility construction	18	46

[1] Refined construction cost estimates available at this point.

BOWDEN NATIONAL FISH HATCHERY

Chairman **Byrd**. The Bowden National Fish Hatchery produces approximately 130,000 pounds of trout annually for stocking waters in the Monogahela and George Washington National Forests, Shenandoah National Park, and various other Federal areas in Pennsylvania and Ohio.

Additionally, the Bowden hatchery is a key component of the Chesapeake Bay striped bass restoration program. Bowden has the capability to produce up to 286,000 striped bass annually.

It is my understanding that much of the increased production potential, 33 percent, will not be realized without the appropriation of $1,017,000 this year for the final increment of the project.

Is that correct?

Mr. **Gerst**. I think I would like to make one comment from a budgetary point. The reduction you see in the 1990 budget is for a one-time project, a specific reduction, and is not a reduction in the operating funding for Bowden.

Beyond that, I would like to defer questions on Bowden to Ron Lambertson, the Regional Director for that part of the country.

Mr. **Lambertson**. The construction request was for $3.3 million to provide a new facility for the phase II striped bass program. In 1989, the current fiscal year budget, we got $2 million of that. Our initial capability statement said that another $1.3 million would be necessary to finish the project.

Chairman **Byrd**. You say $1.3 million?

Mr. **Lambertson**. Yes; the capability statement said $1.3 million.

Chairman **Byrd**. Has the Service determined the benefits in completing the construction work?

Mr. **Lambertson**. For the remaining construction work, what we have done is we brought the engineers out. They are doing their initial design on the first phase for the $2 million. That hasn't been put out for bid yet. After that is put out for bid, our estimate, as I said, is $1.3 million for the remaining portion.

And I'm not sure that that answers your question.

Chairman **Byrd**. You would lose significant benefits if the work were not completed.

BOWDEN CONSTRUCTION

Mr. **Lambertson**. That is true. It was assumed when we got the first part of the money that it was a two-step process. We needed $2 million the first year. And then, in the final phase, it would be the $1.3 million for 1990.

Chairman **Byrd**. Has Bowden been rated No. 1 in terms of suitability from the standpoint of producing the necessary quantities of the Chesapeake Bay strain of the striped bass?

Mr. **Lambertson**. Yes; it has, sir.

STRIPED BASS PRODUCTION

Chairman **Byrd**. In summary, you need to produce striped bass and Bowden is capable of producing this fish, and it is your most suitable hatchery for producing the striped bass?

Mr. **Lambertson**. That is correct.

Chairman **Byrd**. There are significant benefits to completing the present construction project at Bowden.

Mr. **Lambertson**. I do believe so.

Chairman **Byrd**. But, the administration budget does not request the necessary funds.

Mr. **Lambertson**. Any congressional add-on was not continued, as mentioned before.

Chairman **Byrd**. Did the Service include the necessary $1.3 million when it prepared its fiscal year 1990 request to the Department?

Mr. **Lambertson**. Within the regional request, I need to defer to Mr. Gerst as to where it went from there.

Mr. **Gerst**. The majority of construction projects that were requested by the Service were high-priority health and safety projects; this was not.

Chairman **Byrd**. It was not. Was this not proposed by the Secretary to the Office of Management and Budget?

Mr. **Gerst**. No; it was not.

Chairman **Byrd**. I hope that your plans and activities at Bowden this year are not predicated on a zero construction funding for fiscal year 1990, as the budget proposes. I intend to do all I can, with Senator McClure's help, to ensure that the construction funds necessary for the Bowden hatchery are included in the fiscal year 1990 Department of the Interior and related agencies appropriation bill.

And now, assuming that you received the extra construction of funds in fiscal year 1990, would you require additional operating funds to make maximum effective use of the Bowden facility next year?

FISH FOOD PRICES

Mr. **Lambertson**. As was mentioned earlier, one of the big problems that we found, not only at Bowden but other fish hatcheries, has been the 40 percent cost increase in fish food prices.

I understand that the Japanese have cornered the market on fish food. When I was at Bowden 3 weeks ago, that's one thing they mentioned. At that hatchery and others there has been a tremendous increase, 40 percent in operational costs. The current base funds at all of our hatcheries are being stretched by that one impact.

Chairman **Byrd**. So the additional operating funds that make maximum effective use of the Bowden facility next year would approximately how much?

Mr. **Lambertson**. I don't have that figure. I could provide that for the record.

Chairman **Byrd**. Very well, if you would.

[The information follows:]

Bowden NFH Funding

A high priority for the Fish and Wildlife Service is restoration of depleted striped bass stocks in the Chesapeake Bay. To expedite restoration of these stocks, the Service is utilizing hatchery-reared striped bass to supplement poor natural production. Current production from several facilities is far below restoration goal levels, due in part to the limitations of existing facilities and their distances from stocking locations.

The Bowden NFH has the potential to expand and develop approximately five acres of land within existing hatchery boundaries. An adequate water supply would be available from existing sources and the station has successfully reared phase II striped bass. It is within trucking distance of the Chesapeake Bay. The phased expansion has been estimated at $3,300,000, of which $2 million was funded in fiscal year 1989.

If the additional $1,300,000 becomes available in fiscal year 1990, additional O&M funding and a new FTE would be needed in fiscal year 1990 and in future years to accommodate increased work and expenses of producing more striped bass.

[Dollars in thousands]

	Fiscal year 1989		Fiscal year 1990	
	Amount	FTE	Amount	FTE
Operations and maintenance:				
Bowden NFH	$446	5	$230	5
To complete design and construction			1,300	
Additional operations and maintenance			35	1

OPERATING INCREASES AT BOWDEN NFH

Chairman **Byrd**. Now as to White Sulfur——

Senator **McClure**. I want to ask a followup on that, because I'm not sure I understood the answer. I assume a part of the question was with respect to increased operations as a result of the completion of the construction activity at Bowden.

Mr. **Lambertson**. I see. I didn't understand. I thought it was a generic question about base funds. I don't have the specifics on that. I don't anticipate that most of that construction will be completed during 1990, so I'm not sure that there would be additional operational funds for the new construction.

But, just as a generic problem with hatcheries, there is this increased cost to the fisheries program.

Chairman **Byrd**. Assuming that you did receive the extra construction funds in fiscal year 1990, the question was:

Would you require additional operating funds to make maximum effective use of the Bowden facility next year?

Mr. **Lambertson**. Yes; during the next year and the year after is when that construction would come on line.

Chairman **Byrd**. And you are not able to estimate the numbers now.

Mr. **Lambertson**. I don't have that here, but I could provide the estimate.

BUDGET REQUESTS

Senator **McClure**. I have one question and a comment. Because it's been brought up several times, as it has with others, with respect to budget requests for congressional add-ons, there can be two possible reasons why a Department does not request money for a congressional add-on.

One is that you didn't think it was a priority in the first place, so it is not a priority in the second place.

I understand that. But I think you should understand that it is unacceptable from the standpoint of the Congress because we have already made a determination that it does have a suitable priority, and, therefore, ought to be included.

I am sure you have speculated up here. You don't add anything on because you don't have to, knowing that we will add it back. In this way, you get past OMB's restrictions, trusting that we will put it on.

So you don't request money for things we want, knowing that we will give it to you whether OMB likes it or not.

Now, that, too, is an unsatisfactory answer as far as I'm concerned. And it doesn't really help us very much in trying to set the priorities on monies that are too tight in the first place.

We need your help in setting priorities. If you don't participate in that process, your advice is worthless to us because it isn't included.

I am disturbed by that, regardless of the motivation, because if Congress adds it on, there is a good reason that it did so.

Maybe you see a death or retirement or change of heart as changing the congressional activities; however, I really am distressed by what I see as a continuous administrationwide resistance to congressional add-ons. And we have had here several expressions of that.

And I am bothered by it because it cuts you out of the process unless your only motivation is simply to get more dollars.

I think you can do better than that, and I will say that to you and I will say it to others as well.

Please, don't do that. It doesn't help us. It doesn't help us make a rational decision as to the priorities that we ought to be establishing on the expenditures of the taxpayers' money.

Thank you, Mr. Chairman.

Chairman **Byrd**. That was very well-said, Senator McClure.

DEPARTMENTAL BUDGETING

Mr. **Itteilag**. Mr. Chairman, may I make a comment?

This is a continuing problem on a departmentwide, administrationwide basis. First of all, let me say there is no policy either within the Department or within the administration not to continue congressional add-ons. There was no policy.

Second, part of the problem is the problem of timing. When the Service has to prepare its budget in the spring and the Department has to complete a budget in early summer, we don't know all that we need to know.

Admittedly, we find that out later. We find it out at a point when we have lost our flexibility entirely with respect to these matters.

Third, we are going to try. This requires the cooperation of the Secretary, but in the 1991 budget guidance, which I admit is late, but better late than never, we are going to make sure that each of the bureaus in the Department has a complete opportunity to submit all of those things which are added by the Congress, which they agree are a priority and we agree are a priority but heretofore have been excluded simply because there aren't enough dollars.

And we will try to get those—we will try to get those into the budget debate.

And part of it, very frankly, requires that the Secretary of the Department be willing to go forward to OMB in excess of what our budget target might be, and argue for this.

And I think the Secretary has made some statements to indicate that he would be willing to do that. Now, we may end up losing the argument and clearly, there isn't enough money for everything.

But, I think this time around we will try to do better in this regard.

Senator McClure. First of all, last year, in response to some questioning that I did of the Department, we were in effect told that there was a departmentwide policy of ignoring congressional add-ons. So I don't know whether to be encouraged or discouraged by your response today.

Second, I do recognize that in the timing of the budget process, you may not be able to completely consider the add-ons which occur after you have already submitted your suggestions.

But there is in the process, at some level, the opportunity to revise those estimates and take stock of those congressional actions before the final administration budget is sent to us. Maybe if that isn't allowed for in the process, perhaps it should be.

I am not just beating a dead horse here. I'm trying to find a better way to do our business. A way in which you can be fully engaged with us as we try to set priorities on the basis of current issues as well as new things we would like to do.

However, I appreciate your comment. I want to find a new way to answer that question. But it is a problem for us, and I can see that it is a problem for you as well.

Thank you, Mr. Chairman.

BROODSTOCK PRODUCTION

Chairman Byrd. Thank you, Senator McClure. Your White Sulphur Springs hatchery is primarily a broodstock facility. What percent of the Service's trout embryos are spawned at White Sulphur Springs?

Mr. Lambertson. Mr. Chairman, I can tell you that that facility produces approximately 12 million disease-free eggs a year. It's about 10 percent of the national total.

Chairman Byrd. It's about 21, isn't it?

Mr. Lambertson. I believe it is about 10 percent. We can check on that and let you know.

Mr. Robinson. We will provide it for the record.

[The information follows:]

White Sulphur Springs National Fish Hatchery

In fiscal year 1988, White Sulphur Springs National Fish Hatchery distributed approximately 13.7 million trout eggs in support of the Service's National Broodstock Program. This figure represents 22 percent of the Service's inland trout egg production.

BROODSTOCK HATCHERY DISEASE

Chairman BYRD. You're using the new math. I understand that the highest standards must be maintained at a broodstock hatchery to ensure that disease and other problems are not transmitted to other hatcheries that receive the eggs for rearing.

What would the Service do if a hatchery like White Sulphur, which produces approximately 21 percent or 10 percent of your trout eggs, experience difficulties that sharply curtail the egg production?

Mr. LAMBERTSON. That would be a blow to the other Federal hatcheries, and also to a number of State hatcheries that rely on those as a source of eggs——

Chairman BYRD. Would you have to look to foreign sources?

Mr. LAMBERTSON. I'm not sure where we would go. It is a major facility. I assume we would try to increase the production of other facilities that don't have the problem. I know that we do have these problems occasionally. One disease-free hatchery will get disease and we try to make up that production at the other facilities.

Mr. LAMBERTSON. We would work with some of the States, and also some private facilities that produce various eggs that we use in our program.

FISH DISEASE

Chairman BYRD. Dealing with new hatcheries or expanding production beyond the design levels at existing FWS broodstock hatcheries, it would increase the risk of transmitting disease to your production hatcheries, would it not?

Mr. LAMBERTSON. Yes; we would have to have disease-free eggs at all of the stations. We would have to shut them down immediately.

Chairman BYRD. It would seem especially important to maintain a facility like the White Sulphur Springs fish hatchery in operating condition.

But I understand that White Sulphur has a maintenance backlog that would cost over $1 million to repair. Is that correct?

Mr. LAMBERTSON. Yes, Mr. Chairman. I was there several weeks ago and went through the facility. The hatchery manager pointed out a number of things that would make the facility more productive and solve existing problems, and the figure that I got at that time was $1.3 million.

Chairman BYRD. Would you break that down for the record? Itemize it and the amounts that are needed?

Mr. LAMBERTSON. Yes, sir.

[The information follows:]

WHITE SULFUR SPRINGS NFH FUNDING

White Sulphur Springs NFH has major construction and facility improvement needs for which funding has not been appropriated. Approximately $1,100,000 would be needed to fund construction needs. Approximately $200,000 would be needed to purchase necessary capitalized equipment and to fund other rehabilitation needs.

The primary function of the White Sulphur Springs NFH is to produce 12 million disease-free brook, brown and rainbow trout eggs annually for distribution to Federal, State, and foreign fish hatcheries. Spent and culled brood fish are provided to the State of West Virginia for stocking waters in the Monongahela National Forest. A total of 175,000 3-inch rainbow trout fingerlings are provided annually to the Lamar NFH, Pennsylvania, for further rearing to catchable trout size.

The station consists of 22 raceways, 3 earthen ponds, hatchery/food preparation building, broodstock building, utility building, and truck disinfection building on 23.25 acres of land.

[Dollars in thousands]

	Fiscal year 1989		Fiscal year 1990	
	Amount	FTE	Amount	FTE
Station funding: White Sulphur Springs NFH	$565	4	$225	4

Construction funds needed for station development program

Phase I:	
Oxygen injection for hatchery water supply	$40,000
Shelter enclosure for concrete raceways	375,000
Install hatchery security system	40,000
Obtain buffer zone for hatchery water supply	75,000
Rip-rap Wades Creek	70,000
Subtotal	600,000
Phase II: Install pollution abatement system including sludge removal	500,000
Total	1,100,000

Cyclical maintenance—minor rehabilitation

Replace pump Well A	$20,000
Replace bar racks and cross walks in Broodstock building	15,000
Install alfalfa valves in raceway drainage lines	4,000
Replace all drains, downspouts, doors	12,500
Rehabilitate hatchery tanks	4,000
New signs and landscaping	10,000
Replace windows and carpet	9,000
Raceway maintenance, install PBC liners	79,500
Subtotal	154,000

Capitalized equipment

Egg sorting machine with counter	$7,000
Tractor with front end loader and sickle bar	35,000
Mowing tractor with 42 inch deck	4,000
Subtotal	46,000

EFFLUENT TREATMENT

Chairman BYRD. What is the threat if the waste treatment plant is not built?

Mr. LAMBERTSON. That is not only a threat to this hatchery but with other hatcheries in the Northeast and I think throughout the country.

EPA and the States are imposing new standards that I'm not sure that many of the Federal and State hatcheries can meet. When I was at White Sulphur and at Bowden, I noticed that there is a tremendous amount of effluent. I think it is a matter of time before we start having major problems with the waste of these facilities.

Since White Sulphur Springs is such an important broodstock facility, we are looking at that facility as a pilot on how to deal with that situation.

Chairman **Byrd**. Oxygen levels are an important factor in fish production, and yet the Service has not requested the necessary $40,000, which is a relatively small sum compared to the benefits.

Is that the right amount? Forty thousand?

Mr. **Lambertson**. Yes; that is the right amount, sir.

Chairman **Byrd**. Why not?

Mr. **Lambertson**. In the past, we felt that because of the restriction on the amount of maintenance funds we had, that we were better off to maintain the existing levels of water and hope that we had enough water without the injection of oxygen.

We have had some dry years in West Virginia the last couple of years and through other parts of the country, and we are finding reduced water levels. We can do more with injecting oxygen into the water during these dry years.

So it is an insurance system to make sure that some of these hatcheries don't have major problems.

RACEWAY COVERS

Chairman **Byrd**. A number of the fish raceways do not have roofs, and I am told shelter from the Sun would retard the growth of algae.

What problems does this growth cause for hatchery operations?

Mr. **Lambertson**. It greatly increases the maintenance. What we have to do then is remove the fish from those raceways, clean them, and then restore the fish into them.

That activity disrupts the growth cycle.

Chairman **Byrd**. Do other broodstock hatcheries have roofs?

Mr. **Lambertson**. I'm not sure of that. That's the only one I am aware of.

Mr. **Edwards**. Some of our broodstock facilities either have roofs or the capability through tents over the raceways to protect the fish.

Chairman **Byrd**. What would be the cost to cover the outdoor raceways at White Sulphur?

Mr. **Lambertson**. The figure I have is $375,000.

Chairman **Byrd**. The President proposes to reduce hatchery maintenance funding by approximately 31 percent compared to the fiscal year 1989 level.

How large is this systemwide hatchery maintenance backlog?

FISH HATCHERY MAINTENANCE

Mr. **Edwards**. Mr. Chairman, we provided Congress a report in 1988 called "A Review of Maintenance Needs at National Fish Hatcheries." At that time, there was a $62.2 million backlog of which around $46 million was in the construction area and $16 million was in the resource management area.

Through appropriations this year, we would probably reduce it to $59 million, assuming that it hasn't built up somewhere else in the interim.

Chairman **Byrd**. We can defer and defer and defer until we get into trouble and we're not going to let that happen to the White Sulphur Springs National Fish Hatchery within the limited resources available to the subcommittee. I intend to move closer to a pay as you go policy. That approach will help to avoid the severe maintenance problems toward which we are heading.

Senator McClure, do you have any other questions?

Senator **McClure**. No, Mr. Chairman.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. I have a few additional questions that I will submit for the record. Other Senators may wish to submit questions for the record. And if you will please respond as promptly as you can.

Mr. **Robinson**. We will, Mr. Chairman.

Chairman **Byrd**. Thank you very much, Mr. Robinson. And I thank all of your associates.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR JAMES A. McCLURE

Bruneau Hot Springs Snail

Question: In March of 1988, a management plan for the Bruneau Hot Springs Snail was completed which identified several actions necessary to protect the species. The estimated total cost for these actions is $1.0 million over three to five years. The first increment of funding ($180,000) was provided in FY89 (pg. 45).

The Bruneau Hot Springs is known to exist in springs adjacent to the Indian Bath Tub Hot Spring in Idaho. Some feel that the water flows from the aquifer may become inadequate to provide the habitat for the snail.

There are those who say that the springs adjacent to the Indian Bath Tub Hot Spring are the only known habitat areas for the Bruneau Hot Spring Snail. Are the characteristics of the Indian Bath Tub Hot Spring's unique?

Answer: The Indian Bath Tub hot springs may not be unique. The U. S. Geological Survey is currently studying the springs in the area, and based on preliminary results the water chemistry of the Indian Bath Tub does not appear to differ from that of the others. The snail, however, belongs to a group that breathes through gills. These snails are consequently confined to aquatic habitats and disperse poorly over dry land. Such snails often have very restricted and local ranges.

Question: Have you discovered this habitat elsewhere?

Answer: There are similar hot springs in the same area, but they do not support Bruneau Hot Springs Snails. The difference may indicate that flow from these other springs has been interrupted at some time in the past.

Question: Where have you searched?

Answer: Hot springs in southern Idaho and adjacent Oregon have been surveyed without locating additional populations of the snail. Further surveys for new sites are planned in fiscal year 1989.

Question: How much of the management plan is devoted to searching for additional habitats?

Answer: Out of the $1,020,800 identified in the management plan, $7,350 would be devoted to searching for additional habitats.

Question: How much of the $1.0 million management plan is to be devoted to the purchase of water rights and additional habitats which may accommodate snails?

Answer: $32,000 is identified for land acquisition in fiscal year 1989. No funds have been identified for purchase of water rights at this time.

Question: Please provide the funding level necessary for the recovery program to continue the management plan for the snail.

Answer: The management plan identifies $393,000 as needed for fiscal year 1990, and $275,000 for fiscal year 1991. An additional $40,000 per year is needed for Fish and Wildlife Service (Service) oversight of the management plan.

Question: Does the FY90 request provide sufficient funding to continue the work on the snail initiated with FY89 funds?

Answer: No. An additional $253,000 above the requested level of $180,000 would be needed to fully fund the management plan and provide Service oversight of its implementation, thus increasing the funding needed in Fiscal

Year 1990 to a total of $433,000. Fiscal Year 1989 activities pursuant to the plan were funded at $352,000, which included funding from the 1989 Congressional increases for pre-listing and non-game.

Mechanical Devices

Question: Does the Endangered Species Act preclude the use of mechanical device for the recovery of species?

Answer: No. The Endangered Species Act does not preclude the use of mechanical devices for the recovery of species.

Question: Has a management plan or a recovery plan of an endangered species ever included mechanical devices?

Answer: Yes. The Cui-ui Recovery Plan Task No. 442 calls for improvements and operation of Marble Bluff Fish Facility and Numana Dam Fishway. Although the Endangered Species Act is principally concerned with conserving the natural ecosystem upon which endangered and threatened species depend, man-made devices are often employed in various ways to promote the conservation of listed species, and this use may be called for in management or recovery plans. Examples might include radio-tracking devices used to locate sea otters and manatees and spring-loaded poison baits used to control Arctic foxes in nesting habitat of the Aleutian Canada goose.

Question: What would it cost to install a pump and a hot water heater for the snail?

Answer: Estimates cannot be made at this time. However, the chemical content of the water as well as temperature may also be critical in the survival of the snail, and thus just adding water to Indian Bath Tub Hot Springs might not prevent extinction. Any attempt to supplement the flow would have to take account of both temperature and water chemistry if it were to improve the snail's habitat.

Anthony Dunes Tiger Beetle

Question: It is my understanding that the Final Report on the Anthony Dunes Tiger beetle should be available in January of 1990. How much does the Service know about the status and distribution of the beetle?

Answer: All of the five dunes and subdunes at the St. Anthony Dunes Complex in Idaho have been checked for beetles and all areas have beetles. The Service currently knows where both the adults and larvae reside within each dune, at what times of spring and summer adults are active, the average numbers in areas of occurrence, when adults mate, where on the dunes females lay their eggs, where larval burrows occur, what biotic and abiotic characteristics of the breeding areas are distinctive, and what techniques might be warranted for effective management of the beetle at St. Anthony Sand Dunes.

Question: Why is there concern for the species' survival?

Answer: Construction of a new road across the BLM land between Egin and Hamer, Idaho has been approved. Practically none of the 8.8 miles of new road will cross the sand dune habitat of the tiger beetle, but the new road will open areas which were less often used by all-terrain vehicles. Increased use by all terrain vehicles in beetle habitat will cause decline in this species.

Question: Where is the Service surveying for "additional" populations?

Answer: The Service is surveying for "additional" populations in Freemont and Jefferson Counties, Idaho.

Listing

Question: In FY88, $3.5 million was provided for the Listing Program and 44 species were proposed for listing. In FY89, $3.5 million was also provided for the listing program and you anticipate that 55 species will be listed.

For FY90, however, you have requested a decrease of 14 percent (-$500,000) for the listing program (pg. 39), yet the number of species you anticipated proposing for listing will remain at 55.

To what do you attribute increase in productivity from FY89 to FY90?

Answer: The 14 percent reduction is only for prelisting and nongame activities. This reduction would affect conservation actions designed to reduce the need for listing for candidate species, but should have no effect on the Service's ability to add 50-60 species to the list annually. The listing process will continue at the $3 million level to produce 50-60 species added to the list per year.

Question: Please provide for the record a breakdown of the number of species listed, reclassified or delisted from FY88, FY89, and FY90 (pg.41).

Answer:

	Actual	Anticipated	
Action	FY88	FY89	FY90
Species listed	54	50	50-60
Species reclassified	3	3	3-5
Species delisted	1	2-3	1-3

Consultation

Question: The FY 90 budget request for the Consultation Program is proposed to decrease 10 percent (-$300,000), yet the number of formal consultations is anticipated to increase 15 percent and the number of informal consultations to increase 27 percent (pg.42). With this proposed budget decrease, how will you accomplish productivity increases when you state that the complexity of the projects going through the process is increasing?

Answer: The consultation workload is expanding and the complexity of all consultations is increasing due to a greater demand on limited natural resources, an increase in the number of projects in a given area, and an increase in the number of listed species to be considered. However, the Service expects a decline in the amount of review time involved with the Environmental Protection Agency's (Agency) consultations under the pesticide labeling program. It is anticipated that by FY 1990, the bulk of these types of consultations will have been completed and future Agency consultations will involve the registration of single pesticides. Thus, the pesticide workload involved should be reduced. The Service is also striving for efficiency wherever possible.

Question: How will you modify your methods of accountability to reflect consultation workloads resulting from amendments to the Endangered Species Act (pg. 42)?

Answer: The amendments to the Endangered Species Act did not change the section 7 consultation process. However, concerning a new method of accountability for section 7 consultations, the Service is evaluating alternative methods to better quantify outputs of the consultation process, and to more accurately account for time expended to complete individual consultations. The new system may use a combination of the number of consultations along with the number of hours devoted to that consultation.

Recovery

Question: According to the Endangered Species Act, once a species is listed, recovery actions are initiated that are designed to return the populations to levels where protection is no longer required. It is anticipated that the number of species with plans approved in FY 1989 will be 310. It is my understanding that the cost of land acquisition required in the plans exceeds $200 million. What would you estimate the total cost to implement the 310 plans?

Answer: In writing recovery plans, Service biologists necessarily deal with a certain amount of biological uncertainty as to exactly what actions will, in the final analysis, prove to be necessary and sufficient to recover a species. Cost estimates for actions identified in recovery plans actually are estimates. Often, there are few if any comparable historical activities on which to base estimates of future costs. The Service does not anticipate spending as much as $200 million on land acquisition on recovery of endangered species. Land acquisition in fee title is always viewed as a last resort, and is only to be contemplated after all other options are exhausted or demonstrated to be inadequate to accomplish a high priority recovery task.

The Service estimates that fully implementing 310 recovery plans to the point where the subject species are recovered would require between $80 million and $366 million in federal expenditures. The $80 million figure is based on an analysis of the historical cost of recovering two species (the American alligator and the eastern population of the brown pelican) that have already been delisted. Interestingly, these species were recovered after a level of expenditures that was significantly less than was originally projected to be necessary in their respective recovery plans. As the Service learned more about these species during implementation of the recovery plans, efficiencies were identified that allowed tasks to be accomplished easier, faster, and at less expense. The $366 million figure is based on an extrapolation from the budget estimates contained in a sample of recovery plans. It is likely that recovery could be accomplished for considerably less, as historical experience has indicated. It is possible to narrow the range of cost estimates slightly by referring to the proposal by the Service's midwestern Region to recover 28 species for about $12 million over the next decade. Relying on the data and analytical method underlying that proposal, it is estimated that fully recovering the species addressed by 310 recovery plans would more likely cost somewhere between $130 million and $315 million. The wide range in the cost estimates reflects the inherent uncertainty of dealing with biological systems.

Question: The FY90 request for the Resource Management account is $18 million (-5 percent) below the FY89 enacted level (pg. 39). Of the $18 million, $1.5 million is proposed to be taken in the Recovery portion of the Endangered Species program. This is a proposed decrease of 18 percent. Why is the recovery program such a low priority?

Answer: The recovery program remains a high priority for the Service. Through increased involvement of other Federal agencies, States, and the private sector, our ability to develop and implement recovery plans has kept pace with the increased number of listed species, although the per-species investment by the Service has declined. Most of the States have initiated active endangered species recovery programs with initial assistance through the Section 6 grant program. The States should now be in a position to fund priority recovery actions without continued Federal grants. The Service has also been successful in negotiating the participation of major conservation groups and corporations in recovery implementation programs.

Question: What was your request of the Department? Of OMB?

Answer: The Service requested $7.5 million from the Department for recovery activities. The FY 1990 request of OMB for the recovery portion of the Endangered Species program was $7 million.

Endangered Species Amendments

Question: One of the amendments to the Endangered Species Act requires public comment for communities impacted by the listing of a species. How have you incorporated this requirement into your process?

Answer: The Service plans to make recovery plans available for public comment before they are approved. This will be accomplished through announcements in local newspapers and in the Federal Register. When a high level of public interest is anticipated in connection with a recovery plan, the Service will also consider press releases as well as holding one or more public meetings to ensure an adequate opportunity for public involvement.

Question: Are adequate funds requested in FY90 to comply with the amendments to the Endangered Species Act requiring an annual report on the cost of recovery plans by species?

Answer: Conference Report 100-928, Section 1012, to accompany House Report 1467 on the Endangered Species Act Amendments of 1988 signed October 7, 1988 states, "The conferees added the phrase "reasonably identifiable" to ensure that this new requirement will not become unduly burdensome and will not result in the diversion of funds from operation of the endangered species program itself." As part of operating the recovery program, it will cost $100,000 and 2 FTEs of effort to comply with this amendment.

Question: How will you coordinate with other Federal agencies? State agencies?

Answer: The Service will request accounting of expenditures by other Federal and State agencies. In the case of the States, the International Association of Fish and Wildlife Agencies may act as a clearing house for consolidating reports of expenditures.

Question: Do you currently assign a status to endangered species. For instance: extinct, unknown, declining, stable, etc.)?

Answer: Although this type of information has generally been available, the Service has not attempted to formally categorize listed species in the past according to their population trends. In response to the new reporting requirements of the 1988 Amendments to the Endangered Species Act, the Service will begin assigning listed species to status categories on a regular basis. The categories are tentatively expected to include the following: improving, stable, declining, extinct, and unknown.

GAO Study

Question: A recent GAO study made a number of recommendations relating to the priority system used. Specifically, the GAO recommended that the Department either follow the existing priority system or amend the system. The Department disagreed with this recommendation, and stated that the Endangered Species Act provided for some flexibility in developing recovery plans. What were some of the specifics surrounding the GAO recommendations and your disagreements?

Answer: On pages 32-34 of the General Accounting Office (GAO) report GAO/RCED-89-5 titled Endangered Species - Management Improvements Could Enhance Recovery Program it is reported that the Service is not adhering to the established priority system. The GAO report also stated that the Service cited two reasons for deviating from the system: 1) Congressional earmarking of funds to certain lower priority species and tasks, and 2) FWS decisions to recover lower priority species that have high visibility and/or are on the threshold of recovery. The GAO report stated "In fiscal year 1987, the House and Senate Committees on Appropriations directed FWS to use about 11 percent of its recovery funds for eight species."

Earmarking of funds has reduced the latitude of the Service to implement higher priority recovery plans. Congressional directives to allocate funds to certain species' recovery are a response to the public's interest in those species, founded on both appeal to the public, and controversy surrounding some species. The Service has responded to these directions.

The Service makes every effort to utilize its priority system, thus applying the criteria of degree of threat, recovery potential, and uniqueness of taxonomy as guides in allocating recovery resources. The Service balances these criteria with efforts for which support can be generated from other sectors and for species where controversy abounds.

The Service will to take steps to see that recovery guidelines and priority systems are followed more closely, and will see that additional guidance is provided to help those who prepare plans to be more systematic when they assign priorities to recovery tasks. The Recovery Planning Guidelines are being revised, and will highlight this point.

Biological Diversity

Question: The traditional species-by-species approach to management of endangered species focuses large amounts of money into a few high-profile species while the status of other species continues to decline. Some say that the future management of sensitive species should be directed toward maintaining biological diversity.

With additional funds provided in FY89, the Service initiated development of a new technique for identifying and mapping areas of high species richness. Can you elaborate on this technique and where you stand on its development?

Answer: With the FY 1989 add-on, the Sevice initiated development of a method for identifying and mapping areas of high species richness, comparing these with the extent of protected habitats in the area, and identifying gaps where additional habitat protection may be needed to ensure the maintenance of the existing species richness (biological diversity). The objective of the project is to provide a technique to answer the question: Are existing preserves and management areas adequate to protect biological diversity into the future and thus prevent species extinctions? Procedures and data analysis tools have been developed and applied in Idaho. The study has recently been expanded to Oregon, in order to test its application in a greater variety of habitats. Preliminary results from Idaho indicate the method is valid and would provide a tool to allow implementation of a nationwide management program to protect biological diversity with a minimum expenditure of conservation dollars.

Question: Isn't this just going to tell us what we already know; that additional habitat set aside can improve recovery of endangered species?

Answer: The study will help guide Service acquisition and management of preserves, refuges, and other lands, and will help reduce the rate at which species become endangered. It is not directed to answer questions concerning recovery of species already listed as endangered. The question concerning which natural areas should be preserved to protect the most species (some of which may be endangered) or species that are declining in numbers, will be able to be answered by using the gap-analysis technique. Results of this study will provide a quantified and unbiased data set (for the test areas) of vegetation types, species and protected areas that can be used to determine future protection needs.

Question: How will this effort change the traditional species-by-species approach?

Answer: This effort supplements the traditional species-by-species approach by providing resource managers with added tools to recover assemblages of endangered species and to protect other natural resources for which the Service has jurisdiction. Focusing on species-rich areas may offer the most efficient way to stop further endangerment of species not yet listed, to retain maximum biological diversity, and to monitor the status of several species of animals and plants in a small area. Application of this technique to ecosystems would allow recovery efforts to focus on several species simultaneously. This technique will prevent the decline of additional species. The concept of species-specific management for some species, such as certain endangered species, should not be abandoned, but should be supplemented with an ecosystems approach when applicable.

Question: Is the base funding provided in FY 1990 for this effort?

Answer: No. The biological diversity/gap analysis project is being conducted at the Idaho Cooperative Fish and Wildlife Research Unit using the $300,000 add-on provided in FY 1989 through a work order that will carry through to completion in FY 1990.

Food Security Act

Question: In FY 1990, you have requested an increase of $1.4 million for work relating to the Farm Bill (pg. 65). The justification indicates that seventy percent of the funds would be used in wetland reconstruction and thirty percent would be used for technical assistance to support restoration. The wetland reconstruction portion will be used on 9,880 acres of the 200,000 acres in inventory which may be preserved. At this pace, the reconstruction of the inventory will take 20 years. Is this a planned twenty year program or just a slow beginning of a program you anticipate will accelerate ?

Answer: This is just the beginning of a program that could accelerate. An increase of $1.4 million is requested in the 1990 President's Budget for activities authorized by the Food Security Act (Farm Bill) and related authorities. This budget request would be used in addition to the $2.9 million base funding (FY 1989) for wetland restoration and technical assistance. The 200,000 acre figure represents an estimate of existing and restorable wetlands in the Farmers Home Administration inventory that could be protected through conservation easements. Only a portion of that acreage, estimated to be 75,000 to 100,000 acres, would be suitable for wetland restoration and enhancement. Since the inventory is a revolving land base (properties average 3 years in inventory) and new lands are constantly coming into and being sold out of inventory, the 75,000 to 100,000 acres represents the initial pool of restorable acres. At current rates the restorable acres will continue to increase. Additionally, as much as 2 million acres of cropped wetlands are now eligible for restoration through the Conservation Reserve Program. The proposed funding level of $4.3 million which includes a $1.4 million increase for FY 1990, a $1.7 million add-on in FY 1989, and a $1.2 million add-on in FY 1988.

Question: If this is a twenty year pace, have you factored in the potential loss of the available acres of wetlands during the twenty years?

Answer: The Service estimates that less than 45 percent of the original wetlands remain in the lower 48 States. Between the mid-1950's and the mid-1970's, about 9 million acres of wetlands were destroyed, with over 85 percent of the loss due to conversion for agriculture. Wetland losses are still continuing at a level as high as 450,000 acres per year. Pursuit of wetland protection and restoration at a pace commensurate with the loss of wetland habitat is in accord with the President's policy of "no net loss of wetlands."

Question: How will you select the 9,880 acres?

Answer: The proposed funding level of $4.3 million will allow approximately 30,000 acres of restoration per year, all of which are subject to the same procedure. Priority for wetland restoration is directed first at perpetual conservation easements on Farmers Home inventory land transferred to the Fish and Wildlife Service in response to Section 616 of the Agricultural Credit Act of 1987; next at long term (50+ years) restoration opportunities in connection with section 1318 of the Food Security Act conservation easements in exchange for debt relief; and then at opportunities on lands enrolled in the Conservation Reserve Program (10 year contracts). Within these priorities, lands with the greatest wetland values and ease of restoration are restored first. Restoration activities by the Service on private lands are carried out through cooperative agreements with landowners.

Question: What were the identified needs of the Regions for FY 1990?

Answer: For work related to the Farm Bill. the regions requested, during formulation of the FY 1990 budget, $2.3 million in addition to the $2.9 million base funding for a total of $5.2 million. Of this additional amount requested by the regions, $1.4 million is requested in the FY 1990 Budget Justification for a total of $4.3 million.

INEL Contaminants Monitoring

Question: Funding provided in previous fiscal years has been used to develop and test a strategy for long-term contaminant monitoring on National Wildlife Refuges and to develop a scientifically sound series of protocols for use by the Service in monitoring contaminants in the environment. It is my understanding that the protocols have been developed and tested but not implemented in the field. What is the status of the implementation of these protocols?

Answer: Development of contaminant monitoring protocols by the Idaho National Engineering Laboratory (INEL) has not yet been completed. Implementation of the protocols has not begun and cannot be initiated until the protocol development is completed and the protocols have been field tested and evaluated. The INEL current schedule (as of March 7, 1989) calls for protocols to be finalized by September 1989, followed by a demonstration in February 1990 and a field test in March 1990. The final product is scheduled for completion in July 1990.

Question: Is there a reason not to implement?

Answer: The INEL plan will not include a strategy to implement the plan on a nationwide basis. Therefore, the Service intends to develop the strategy itself and has begun some preliminary work toward that end. A full implementation strategy cannot be completed until the products have been received from INEL and the Service has had an opportunity to evaluate them.

Question: What is the additional cost to implement?

Answer: The INEL does not expect to have a plan ready for field testing until March 1990 and a final product until July 1990. The Service is in the preliminary stages of developing an implementation strategy. It is impossible to establish a budget and identify costs until we have had sufficient time to evaluate the plan and finalize a strategy.

Question: Is additional testing necessary?

Answer: Current funding and contract agreements with INEL provide for a single field test of the plan. Full implementation of the refuge monitoring plan will not begin until additional testing is completed by the Service to evaluate its applicability to a variety of ecosystems encountered within the refuge system, e.g. seasonal vs permanent wetlands, agricultural drainage areas, arid/desert areas, and upland areas with suspected contaminant spills.

Environmental Contaminants

Question: The impact of the proposed $500,000 reduction in the Environmental Contaminants program for FY 1990 is not completely clear. Funds provided in FY 1989 permitted the Service to increase emphasis on field response to contaminant issues. The justification states that funds requested in FY 1990 are adequate to address the highest priority contaminant issues impacting Service lands (pg. 78). Does this mean that the increased emphasis on contaminants is not included in the FY 1990 budget?

Answer: The success of the contaminants program has historically been in direct proportion to the availability of environmental contaminants personnel to identify and assess chemical contamination of fish, wildlife and their habitat. The $500,000 addition in FY 1989 was used to complement base contaminant funding at the regional level. These funds are not included in the FY 1990 budget.

Question: How will your FY 1989 efforts on drainwater, contaminant disease interactions in the arid west, and responses to Superfund/CERCLA be impacted by this reduction?

Answer: The proposed $500,000 reduction for FY 1990 will not have an impact on FY 1989 studies related to irrigation drainwater, contaminant-disease interactions in the arid west, and the assessment of impacts to trust resources from Superfund/CERCLA activities. Congress added $500,000 and increased staffing in FY 1989, House Report 100-713, page 15; and the studies conducted with this one-time add will be completed.

National Wetlands Inventory

Question: An additional $250,000 was provided for the National Wetlands Inventory in FY89. Of this amount, the Service was directed to spend $130,000 in West Virginia for wetland mapping. The remainder was allocated to accelerate map production in 1989 in support of the North American Waterfowl Management Plan and the "Swampbuster" provision of the Farm Bill. When the budget states that project is fully funded and will be completed in FY90, does that mean that West Virginia will be fully mapped?

Answer: Yes, the State of West Virginia will be fully mapped.

Question: Where was the other $120,000 spent?

Answer: The remaining $120,000 was allocated to the Regions to expedite review of photointerpreted photography and facilitate interagency review of draft map products in support of the North American Waterfowl Management Plan and the "Swampbuster" provision of the Food Security Act.

Question: By state, what percent of the country was mapped by the end of FY88?

Answer: The status of the National Wetlands Inventory mapping effort by State is as follows:

STATE	% COMPLETE
Alabama	50
Alaska	16
Arizona	100
Arkansas	30
California	55
Colorado	45

Connecticut	100
Delaware	100
District of Columbia	100
Florida	98
Georgia	35
Guam	100
Hawaii	100
Idaho	20
Illinois	100
Indiana	80
Iowa	10
Kansas	15
Kentucky	30
Louisiana	70
Maine	20
Maryland	100
Massachusetts	100
Michigan	65
Minnesota	65
Mississippi	70
Missouri	10
Montana	5
Nebraska	45
Nevada	40
New Hampshire	20
New Jersey	100
New Mexico	100
New York	10
North Carolina	20
North Dakota	50
Ohio	30
Oklahoma	90
Oregon	35
Pennsylvania	85
Rhode Island	100
South Carolina	20
South Dakota	45
Tennessee	55
Texas	45
Utah	20
Vermont	100
Virginia	25
Washington	100
West Virginia	20
Wisconsin	*
Wyoming	10

* Wisconsin is conducting its own wetlands inventory using the Service's classification system.

Question: Did you meet the September 30, 1988 deadline for the mapping of top priority areas?

Answer: Yes, the National Wetlands Inventory completed mapping the top priority areas by September 30, 1988.

Question: What about the September 1998 deadline for other areas?

Answer: The National Wetlands Inventory is on schedule to complete the mapping of the contiguous United States by September 30, 1998. The National Wetlands Inventory maps will be completed for Alaska and other noncontiguous portions of the United States, as soon as practicable after September 30, 1998, as directed by the Emergency Wetlands Resources Act of 1986.

Question: How much is provided in this budget for the Status and Trends report due in FY90.

Answer: The cost of the report is estimated to be $1.4 million; it will be funded from base funds, as was the 1982 Wetlands Status and Trends Survey.

Question: If zero, please provide for the record the justification for ignoring this report and the amount of funds necessary to do the report?

Answer: Currently, base funding allocated for National Wetlands Inventory mapping operations is proposed for use for the Wetlands Status and Trends Survey. The estimated cost of $1.4 million, is approximately 27 percent of the FY 1990 National Wetlands Inventory funds. This will slow mapping efforts considerably in FY 1990 as indicated in the Workload Factors on page 82 of the Budget Justification. As stipulated in the Emergency Wetlands Resources Act, this study is to be completed every ten years.

Question: The workload data for the National Wetlands Inventory indicated a decline in the distribution of wetland maps from 130,000 in FY88 to 95,000 in FY89 to 75,000 in FY90. Would distribution be declining if the numbers included the 22 State-run distribution centers.

Answer: No. If the distribution through all the State-run centers were counted, there would be a steady increase in the number of wetland maps distributed. When the demand for wetlands maps doubled between FY85 and FY86, the Service made a major effort to direct users to the State-run distribution centers to reduce the number of requests on the Service. There are now 23 State-run distribution centers. A new one was recently added in West Virginia. The Bureau of Planning in Guam, St. John's River Water Management District in Florida and Ardic Book Distributors, Inc. of Skillman, New Jersey, also conduct secondary distribution of the Service's National Wetlands maps.

Question: President Bush recently indicated his support for a national "no net loss" of wetlands. How does this budget comply with that declaration?

Answer: The budget complies very well with President Bush's declaration of support for a national "no net loss" of wetland policy. The wetland map information, as well as wetland status and trends information, is a pragmatic measure of the success or failure of a "no net loss" in wetlands policy. The Service's National Wetlands Inventory project provided baseline information on the status of wetlands via two mechanisms. First, was the national wetlands status and trends study. The information from the first report has been widely used and has provided the information needed to implement such measures as the Emergency Wetlands Resources Act of 1986 and the swampbuster provision of the 1985 Food Security Act.

Second, while the national study provides needed information on national status and trends of wetland acreage, the inventory project also produces wetlands maps. In some States where the inventory has been completed, summary reports on wetland acreage, distribution, losses and gains can be assimilated into the decision making process. For example, the State of Maryland recently was able to summarize wetland acreage statistics by county, to provide factual information for the proposed non-tidal wetlands legislation now pending before the General Assembly. In order to produce this type ofinformation, the wetlands of the State had to be completely mapped, the map information was computerized and acreage summaries were generated. From these data, State reports can be produced to help detail wetland status and provide the necessary information for an informed debate on any legislative proposals.

Factual information in the form of accurate wetland maps, computerized acreage summaries and State wetland reports can help defuse many arguments that center around misconceptions about how many wetlands acres are located where. Without this information the environmentalists normally under estimate the amount and the developers normally over-estimate the amount of wetland remaining. These estimates cause discussions to be unnecessarily antagonistic. This baseline information forms the very essence of a "no net loss" policy on any administrative level and provides the starting point to know if "no net loss" is being achieved.

Question: Will the inventory need to be expedited?

Answer: It would be preferable to collect all the wetland information as expeditiously as possible to assist in the evaluation of "no net loss" wetlands policy, but the Department has sufficient funds budgeted to meet all of its wetland inventory obligations according to the pace specified under the 1986 Emergency Wetlands Resources Act.

Question: Have you submitted any budget amendments to the Department?

Answer: No, the Service has not submitted any budget amendments to the Department.

Refuge Operations and Maintenance

Question: From FY82 to FY89, 54 units with nearly one million acres are anticipated to be added to the system. In addition, during the same time frame, it is anticipated that existing refuges will be expanded nearly 2.0 million acres through land acquisitions and easements. The FY90 budget request for Refuge Operations and Maintenance, however, is eight percent below the base level. With an expanding system can you honestly say that the FY90 request meets the needs of the program?

Answer: The FY 1990 request is sufficient to provide essential operations and maintenance on the majority of refuges. Only custodial levels of operations and maintenance can occur at this funding level on certain refuges. The funds will support essential operational activities as well as preservation of endangered species, unique ecosystems, waterfowl habitat and other fish and wildlife values.

Question: What was your request for Refuge Operations and Maintenance of the Department? of OMB?

Answer: Our request for Refuge Operations and Maintenance of the Department was $116,294,000 and OMB was $113,378,000.

Question: How has your visitation changed during the past few years?

Answer: Since FY 1987 the Service has experienced increasing public use of facilities and resources.

Challenge Grants

Question: The budget speaks very highly of the benefits from the Challenge Grant program implemented in FY88 (pg. 97). The number of responses increased from 55 in FY88 to 72 in FY89. In FY88, the private sector offered $372,000 more in assistance than the Federal government. In FY89, this number was $647,000. Are there any other programs that provide this much private sector support?

Answer: Yes, the Service's Volunteer Program provides outstanding private sector support. In FY 1988, the Service utilized 12,416 volunteers who donated 478,568 hours of labor worth an estimated $3,871,000.

Question: Why didn't you request funds in FY90 for this program? Don't you feel it was beneficial?

Answer: The Challenge Grant Program is a successful program and has enhanced the overall operation and maintenance of Service lands by completing additional projects through cost-sharing with conservation groups, private individuals, public agencies, and other non-federal sources. In FY 1988, these projects provided $504,000 in public benefits for a $1:$1.52 cost benefit ratio. However, funding provided in the President's Budget provides sufficient flexibility to support continued programs for volunteer activities.

Question: Can you describe some of the projects which have been funded under this program?

Answer: Projects funded under this program have included construction and rehabilitation of water control structures and waterfowl impoundments; wetlands and fishery habitat development; maintenance and enhancement; equipment purchases for the construction, restoration, and enhancement of wetlands; and research on refuge resources issues affecting waterfowl. Specific projects recently completed include: construction of a picnic shelter at the Neosho National Fish Hatchery, Neosho, Missouri; dike construction and restoration of 200 acres of wetlands at the Havasu National Wildlife Refuge, Needles, California; and construction of artificial reefs for fish habitat improvement at the Deer Flat National Refuge, Nampa, Idaho.

Entrance Fees

Question: In FY 88, the Service initiated the collection of entrance fees at 30 of the over 400 refuges in the system. At the close of FY 88, $1.4 million was collected from these refuges with 30 percent going to refuges for operations and 70 percent to the Migratory Bird Conservation Fund. The justification indicates that in FY 89 the Service will reevaluate the refuges collecting entrance fees. At those refuges which are not meeting expectations, the program will be considered for cancellation. The justification also states that "several refuges will be reviewed as possible candidates for collecting fees." How many will be reviewed for expansion of fees?

Answer: The Service is evaluating the 30 refuges currently collecting entrance fees. This evaluation process will be completed by July 1, 1989. After analyses of our information, a review will be conducted on a Service-wide basis for the purpose of determining whether additional refuges in the System meet the fee collection criteria established by the Emergency Wetlands Resources Act of 1986.

Question: Why hasn't the Fish and Wildlife Service taken entrance fees in a manner similar to the National Park Service?

Answer: The Service entrance fee program is conceptually similar to the National Park Service Fee program. The criteria contained in the Emergency Wetlands Resources Act of 1986 were utilized in establishing and implementing the entrance fee program within the Service. In many instances, however, the National Park Service is better suited for collection of entrance fees than the Service by virtue of geographic locations that are more readily accessible to the general public. Further, the primary mission of the National Park Service is to accommodate public recreational use. The Service mission is primarily for wildlife protection and public use is secondary and must be compatible with our primary mission.

New Refuge Operations

Question: You have requested an additional $750,000 in FY90 for New Refuge Operations. The justification states that you anticipate nineteen refuges will be established in FY89 and FY90. Can essential operational needs really be provided with $39,000 per refuge?

Answer: Funds would not be allocated on the basis of equal amounts for each new refuge. To compensate for reduced operational funds, new methods of administering these refuges have been utilized. For example, new refuges may be complexed with existing refuges to reduce overhead costs. Furthermore, some refuges have greater start-up costs, depending on their mission. The development of new refuges may proceed in stages as funds become available. The requested funds are intended to provide a custodial level of management for new refuge lands for the primary legislated purposes for which they were established. Essential activities, including the preservation of endangered species, unique ecosystem, waterfowl habitat, and other fish and wildlife values are expected to be accomplished with the available funds.

Question: It seems as if this small amount will only provide funds for fences and public access might be impaired. Is this accurate?

Answer: Basic protection through law enforcement, posting, limited habitat development, and some public use may be accomplished with the available funds. However, public use may not be initiated or might be reduced or curtailed where necessary to protect endangered species, unique ecosystems, or the public health and safety.

Tern Island

Question: Of the $1.0 million provided to the Hawaiian Islands National Wildlife Refuge in Fiscal Year 1989, $500,000 was provided to enable the Service to operate Tern Island on a year-round basis, and to initiate restoration of forest bird and Hawaiian waterbird habitat. These funds have not been requested in Fiscal Year 1990 and Tern Island will be operated for nine months a year. How much of the $500,000 is for the three month operation of Tern Island?

Answer: Of the $500,000 provided to the Service to operate Hawaiian Island Refuges, $250,000 was utilized for the operation of Tern Island on a year-round basis. This amounts to $62,500 per quarter for Tern Island operation and maintenance. However, the difference in expense is not solely for an additional three month presence, but rather reflects the cost of year-round, full time operation, as opposed to a nine month, field camp operation.

Question: How much is for restoration of forest bird and Hawaiian waterbird habitat?

Answer: In Fiscal Year 1989, $160,000 was provided to the Hakalau Forest Refuge for restoration of Hawaiian forests and $90,000 was provided to the James Campbell and Hanalei Refuges for enhancement of Hawaiian waterbird habitat.

Question: Why is the three month operation of Tern Island so expensive?

Answer: The operation of Tern Island on a year-round basis costs $250,000 per year. Most of these funds are for maintenance of buildings for housing; maintenance of water catchment, storage and delivery systems, and photovoltaic power generation systems; aircraft runway maintenance and equipment; and rental of vessels and aircraft for delivery of supplies.

The nine month alternative involves a change of operation of Tern Island from a permanent station to a temporary field camp. This nine month field camp operation would cost approximately $100,000 annually. Personnel would be housed in tents, all camp supplies, food, and water would be transported to the island only once annually, and sophisticated systems for water and power would not be required. The runway also would not be maintained. Personnel costs would be less, as trained maintenance personnel and permanent full-time Refuge Managers would not be required on the island.

The decreased maintenance required in the field camp mode of operation, and the reduced personnel costs involved, account for the expense of the additional three months of full-time, year-round operation.

Alaska Subsistence Reimbursement

Question: Section 805 of ANILCA requires the Secretary to reimburse the State of Alaska for reasonable costs relating to the establishment and operation of the regional advisory councils, established by the state, and the operation of the state fish and game advisory committees (pg. 110). Do you disagree with the size of reimbursement?

Answer: The position of the Fish and Wildlife Service, as well as the Department of the Interior, is that past Federal funding in the amount of $6,882,000 since 1983, has aided the State of Alaska in initiating and establishing its subsistence program and that additional Federal funding is not necessary to continue the program at adequate levels.

Question: Do you disagree with the number of advisory councils?

Answer: At present there are six advisory councils. This is the minimum number mandated by the Act. Both the State and the Federal agencies with subsistence responsibilities are discussing the need for a larger number of regional councils.

Question: Do you consider this a simple reimbursement or an authorization?

Answer: The program is considered a "reimbursement program" authorized by ANILCA.

Question: If so, why do you call it a grant?

Answer: It is called a "grant" due to the governing OMB Circular A-102 "Grants and Cooperative Agreements with State and Local Governments" terminology. Sections 6301-08, title 31, U.S. code governs the use of grants, contracts, and cooperative agreements. Since this program is not a contract, nor a cooperative agreement, it is referred to as a "grant."

Forensics Laboratory

Question: The National Fish and Wildlife Forensics Laboratory at Southern Oregon State College is in the initial phase of operation. In FY 1989, $500,000 was provided to the Service for additional Forensics laboratory operations. The FY 1990 budget, however, does not propose to retain these funds. Instead, the budget proposal provides funding "which is sufficient to address the highest priority forensics laboratory work." What will not be provided in FY 1990?

Answer: Forensics analysis and species-specific identification in support of Service-initiated investigations will be limited to literature searches and technical assistance. Forensics assistance to State and international conservation agencies will be eliminated.

Question: What is the maximum efficient funding rate for the laboratory?

Answer: The maximum efficient funding for annual operation and maintenance costs for the laboratory is estimated to be $1,750,000 if it were fully operational as designed. Staffing would be comprised of a laboratory director and approximately 28 employees. At this funding level, the Service would be able to provide a full range of forensic science support to the Division of Law Enforcement and State international wildlife law enforcement agencies.

Law Enforcement

Question: How have the Service's types of law enforcement cases changed over the past few years? More criminal, less civil? More serious?

Answer: In the late 1960's and early 1970's, Congress enacted a number of new laws that provided Federal protection to wildlife. These included the Endangered Species Act, the Marine Mammal Protection Act and the Airborne Hunting Act. These new laws provided for penalties that were substantially higher than previous Federal wildlife laws. At the same time, Congress amended some of the existing laws such as the Lacey Act and the Bald and Golden Eagle Protection Act to expand their coverage and to increase their penalties. This trend toward providing stronger penalties for wildlife crime has continued into the 1980's with further amendments to the Lacey Act.

In response to Congress' increased emphasis on wildlife protection and the expanded authority provided by these new and amended statutes, the Service has changed its enforcement priorities. Prior to the early 1970's, the Service primarily directed its enforcement efforts toward controlling the sport hunting of migratory birds. Service officers were essentially Federal game wardens. Beginning in the early 1970's, the Service began directing its enforcement efforts toward large scale, commercial wildlife crime that has the greatest impact on wildlife populations.

As criminal penalties have increased, prosecutors have been more willing to accept wildlife cases for prosecution. The Service has become adept in the use of sophisticated investigative techniques, such as the use of undercover operations to infiltrate wildlife criminal organizations. The Service has used its civil penalty authority to address many violations that would have previously been rejected for criminal prosecution. The courts, in response to both the increased penalties and the Service's new priorities, have begun to impose stiffer sentences on those convicted of willful criminal activity.

As a result of these various factors, the Service is generally investigating more serious crimes than it did only a few years ago. Many of the Service criminal investigations involve organized rings who are engaged in illegal commercial exploitation of wildlife. Because these investigations are more complex, the number of criminal investigations conducted by the Service is lower than a few years ago. However, the Service believes that the results of these investigations provide a stronger deterrent to future wildlife crime.

Civil penalties are still used by the Service to handle violations in which criminal culpability cannot be proved or does not exist. The number of civil penalty actions has remained relatively stable over the years. Many of these actions only involve forfeiture of illegally imported wildlife. Others, however, have resulted in substantial monetary penalties being assessed.

Migratory Bird Management

Question: As I review the proposed 42 percent increase in the Migratory Bird Management Plan for FY 90, the phrase "hog wild" comes to mind. Most of the increase relates to the North American Waterfowl Management Plan which I will discuss in a minute. I am, however, curious to know if there is a specific reason why the sudden interest in this program when you proposed a decrease of 8 percent in FY 89?

Answer: The increase is based on two major components. First, the establishment and the initial implementation of Joint Venture activities. There are now 6 Joint Ventures located in the Central Valley, the Prairie Pothole Region, Lower Mississippi Valley, Gulf coast, Atlantic coast, and the Lower Great Lakes/St. Lawrence Valley. These Joint Ventures are in initial stages of operation, from the development and dispersal of planning documents and information and education materials to providing technical assistance to private landowners for preserving and enhancing waterfowl habitat. Funds are needed to implement these activities. The second major component includes collecting data vital to the population management of waterfowl. Changes in distribution and abundance of nesting and wintering waterfowl require an expansion and refinement of current survey activities. The data will be used to support joint venture activities through surveys, banding programs, and data management/analysis.

North American Waterfowl Management Plan Implementation

Question: In FY 89, $200,000 was provided for the implementation of the North American Waterfowl Management Plan. This plan, a historic, high level agreement between the U.S. and Canada is designed to restore North

America's waterfowl populations, principally through habitat conservation. According to the plan, the Service will work with states, other Federal entities, and non-government organizations to protect and manage habitats in six key geographical areas (pg.128). For FY 90, you have requested $2.6 million for the implementation of the plan, yet no FTEs are requested for these funds. This seems to be an extraordinary increase of funds. Can you effectively spend $2.6 million for this in FY 90?

Answer: Although the Service did not request FTEs as part of the 1990 budget increase for the North American Waterfowl Management Plan (NAWMP), the Service is hopeful that as negotiations on the FTE allocation proceed within the Administration, there will be other opportunities to revisit this matter.

As originally envisioned, the Service's 1990 budget request for the NAWMP included $280,000 and 4 positions for five of the Joint Ventures. Funds totalling $1,500,000 would be used to support implementation of Joint Venture plans, providing technical assistance for private land restoration, demonstration projects and developing cooperative agreement programs with private land owners for habitat enhancement.

The 1990 proposal also included $900,000 to improve breeding and wintering ground surveys, develop specialized waterfowl banding projects that will provide an improved basis for harvest management and improve management of survey and banding data bases.

Examples of tasks to be completed within the Joint Ventures are communication and educational projects, habitat enhancement on sites in Maryland, New Jersey, and New York, and technical assistance to private landowners.

Question: Is it the most efficient use of $2.6 million in your FY 90 budget?

Answer: The $2.4 million increase request is in addition to the $200,000 base funding for core management. It is requested for implementation of the NAWMP to support Joint Venture activities in the 6 high priority areas identified, in addition to being a major thrust, to improve survey, banding, and data management. The Service believes that they are all important and necessary first steps before resources can be focused to on-the-ground waterfowl habitat conservation efforts.

Question: Wouldn't we be using your funds more efficiently if this program were reduced to $1.3 million and the remainder put into Operations and Maintenance?

Answer: No. With the expenditure of $2.4 million increase for Joint Venture activities, the total effort in support of the NAWMP will be matched many fold. This funding request is for the Service's participation in the Joint Ventures which are also supported by States, other Federal entities, and nongovernmental organizations. These Joint Venture activities support the protection and management of breeding, migration, and wintering habitats for North American waterfowl.

Question: Since you have not requested any FTEs, should I assume that you are either planning on exceeding your FTE target or are you planning to find FTEs elsewhere?

Answer: Typically, upon enactment of appropriations, the level of FTE's is reevaluated. It is expected that the Department will conduct a similar review for FY 1990.

Question: Please provide for the record a geographic distribution for the use of the funds.

Answer: The list follows:

Activities supporting implementation of the NAWMP will be focused in the high priority habitat categories identified in the Plan.

Geographic Area	Funding
Lower Mississippi Valley	$ 280,000
Prairie Pothole Region	280,000
Atlantic Coast, Great Lakes and St. Lawrence Valley	280,000
Central Valley, California	280,000
Mississippi/Gulf Coast	280,000
Twin Cities Regional Office Coordination	100,000
Subtotal	$1,500,000

The Migratory Bird Management Office (a headquarters office with staff located at the Patuxent Wildlife Research Center, Laurel, Maryland) will undertake activities to improve data bases relating to distribution and abundance of nesting and wintering waterfowl in support of the Joint Ventures. A total of $900,000 is budgeted for these activities. The general geographic areas where they will be conducted includes:

Extensive survey and banding programs will be focused on the Prairie Pothole Region; and

Additional survey/banding programs in the Lower Mississippi Valley, Central Valley, and Atlantic Coast.

Subtotal	$ 900,000
Total NAWMP Increase	$2,400,000

In addition, the funding for wetlands conservation activities (see next question) will be used primarily in the 3 Joint Ventures that are the farthest along in development of Joint Venture plans, including:

Gulf Coast	$ 300,000
Lower Mississippi Valley	400,000
Prairie Pothole Region	600,000
Total	$1,300,000

Wetlands Conservation

Question: You have requested $1.3 million for a new initiative called Wetlands Conservation. This initiative is to provide for a diversity of long term wetland enhancement activities which are to be cooperatively funded by private, state, and federal partners in the North American Waterfowl Management Plan. Forest restoration, water control structures and soil development are examples of uses for these funds. Please explain the relationship between these funds and the funds for the North American Waterfowl Management Plan.

Answer: In future years, the Service's ability to perform on-the-ground activities can be expected to use a greater percentage of all North American Plan funding, but it is important in the initial stages of the Joint Venture program that efforts be made to create a cooperative program with federal, state, and private organizations. This requires continual communication; the development of planning documentation so that each party has an active role; a public information and education program to incorporate the private sector; and refined survey, banding, and data management techniques.

Question: Wouldn't the program be more productive if we increased this program to $2.4 million and reduced the funds for the North American Plan to $1.3 million?

Answer: It is important that efforts be made to create a cooperative program with federal, state, and private organizations. This aspect of the program will ensure that the Service will be able to perform on-the-ground activities for wetlands conservation. The wetland conservation funding request allows the Service to begin on-the-ground activities while still establishing the organizational structure to carry out these activities as well as the increased data collection needed to effectively implement the waterfowl wetland habitat conservation programs.

National Fish and Wildlife Foundation

Question: The budget also requests language to allow the National Fish and Wildlife Foundation to accept contributions to match the Service's $1.3 million initiative, totaling $6.8 million, for wetlands restoration. What is the basis you used to determine the amount of funds which can be raised?

Answer: The Service's proposed funding level of $6.8 million for wetland conservation activities was used as the basis for determining the amount of funds the Foundation could raise. This funding level was proposed to match the Service's $3.7 million request for implementation of the North American Waterfowl Management Plan and $3.1 million proposal for wetlands conservation and restoration activities authorized under the Food Security Act of 1985 (Farm Bill) and related authorities. The Foundation has been successful in attracting private contributions but private fund raising success is based on its ability to receive Federal matching funds, not to match funds appropriated to the Service for agency projects. In developing the FY 1990 request, the Administration proposed this language to recognize the private sector's involvement in the Federal sector's dedication of resources for the conservation of wetlands. Upon further review, the Department has determined that the authorizing legislation for the Foundation (P.L. 98-244 and P.L. 100-240) already provides this authority.

Question: How much has been raised privately for the plan?

Answer: As of March 31, 1989, the National Fish and Wildlife Foundation has raised $4,597,632 in private contributions for the North American Waterfowl Management Plan. In addition, the Foundation has received commitments of $15 million, including $3.3 million from the States, $4 million from Ducks Unlimited, and $7.7 million in funds or lands from private sources as a match for specific North American Waterfowl Management Plan projects initiated by the Foundation. Of the $15 million committed, $6 million will come directly to the Foundation and $9 million will be sent directly to Foundation-supported projects.

Hatchery Maintenance

Question: You have proposed a reduction of $1.5 million (pg. 147) in Hatchery Maintenance (-31 percent) added in FY 1989 for the elimination of high priority maintenance needs. These funds were added to address the Service's $62 million backlog in hatchery maintenance needs. Can we keep up with the needs of the maintenance program with the remaining $3.5 million program?

Answer: The requested hatchery maintenance funding of approximately $3.5 million will be used toward addressing critical annual maintenance necessary for the continued operation of hatcheries and related facilities. However, it will not reduce the $62 million maintenance backlog that was identified in the report entitled "A Review of Maintenance Needs at National Fish Hatcheries" that was submitted to Congress in May 1988.

Question: Why are there no base adjustments for maintenance?

Answer: Maintenance of Service operated hatcheries is very important for continuing hatchery program objectives in a cost-effective manner. However, maintenance projects are such that they can sometimes be deferred without major disruptions to ongoing production programs. The FY 1990 budget request proposes that the additional funds of $1,000,000 appropriated in FY 1989 for hatchery maintenance be eliminated, and that the annualized portion of the 1989 Federal pay raise and fixed costs be funded by reducing the maintenance budgets for hatcheries by $574,000. The requested hatchery maintenance base of approximately $3.5 million will be used toward addressing critical annual maintenance necessary for the continued operation of hatcheries and related facilities.

Question: Shouldn't there at least be inflation adjustments, or will these projects cost the same in FY 1990 as in FY 1988 when the $62 million list was put together?

Answer: Prior to allocating FY 1990 hatchery maintenance funding, the report entitled "A Review of Maintenance Needs at National Fish Hatcheries" will be updated to address changing needs, costs, and priorities. Inflation adjustments will be taken into account during the update of the report. When the $62 million list was put together in 1988, the costs of unfunded maintenance needs were projected to October 1988. The updated report will project costs of unfunded maintenance needs to October 1989, the beginning of FY 1990. The updated report will be used as the basis for allocating a portion of hatchery maintenance funding.

Acid Precipitation

Question: In FY89, the Service initiated a State of the Science report on the biological effects of acid neutralization for the National Acid Precipitation Assessment Program. In addition, the Service contracted studies in West Virginia and New York to investigate the biological effects of mitigation liming in watersheds and associated wetlands (pg. 181). What is the status of these studies?

Answer: The study in West Virginia has been initiated through the West Virginia Cooperative Fish and Wildlife Research Unit, located at West Virginia University. Initial tasks will establish baseline water quality values and monitor invertebrate populations after the experimental acidification of the Fernow Experimental Forest by the Environmental Protection Agency. Final negotiations have been completed with the New York Cooperative Fish and Wildlife Research Unit at Cornell University to evaluate the biological recovery and utilization of streams after experimentally liming the watershed. These studies are fully funded and the final reports from the States will be delivered in 1991.

Question: Have you evaluated the need for additional research?

Answer: Yes. The baseline information obtained from these ongoing studies will strengthen our predictive capability when evaluating mitigation strategies and will assist the resource manager in applying the results to other geographic regions. Additional research could assist in evaluating the biological effectiveness and the long term ecological effects of the treatments; however, the Service proposes that further research be delayed until final baseline information from the five ongoing cooperative mitigation projects with the States is obtained and interpreted.

Nongame Migratory Birds

Question: The justification indicates the priority studies will begin in FY89 to address the needs for research identified in the revised Nongame Migratory Bird Management Plan (pg. 186). Studies will focus on development of appropriate status surveys for species not adequately censused by the

Breeding Bird Survey. The FY90 budget (pg. 189) proposes to perform the most critical research needs identified in the Nongame plan but proposes a decrease of $500,000 (-25 percent). How much of the priority projects do you plan to fund from completed or nearly completed studies?

Answer: The May, 1988 plan (entitled Nongame Migoratory Bird Strategies) will be revised this summer. New priorities may be identified to address the requirements of Public Law 100-653, Section 13 - Conservation of Migratory Nongame Birds. About $100,000 are planned to be available from completed projects in the Nongame portion of the Wildlife Research budget for FY 1990; these funds will be used to address the highest priority needs in the revised research strategy in this plan.

Question: What are the priority research needs identified in the revised Nongame Plan?

Answer: Research outlined in the current Nongame Bird Strategies document (May, 1988) includes research underway in FY 1988; the revision of the plan this summer will include research needs for the next five to ten years. Priority research identified in the current plan is the full continuation of studies on the bristle-thighed curlew, forest habitat fragmentation, Cheyenne Bottoms shorebirds, and improved survey methods. These studies were funded by Congressional add-on ($500,000) in both FY 1988 and 1989.

It is premature to identify priority studies that will be addressed in the revision of the plan. However, studies that are considered important in the current research effort related to Section 13 (PL 100-653) include: the effects of cutting practices on Forest Service lands; control of brown-headed cowbird nest parasitism on declining species; Atlantic coastal waterbird status; and expanded shorebird monitoring methods.

Hagerman Research Field Station

Question: Several years ago, additional funds were provided for the reconstruction and expansion of the research station in Hagerman, Idaho. The station is designed to conduct research on physiological and nutritional requirements of rainbow trout and Pacific Salmon.

During the FY 1988 hearing, the Service indicated that $525,000 was necessary to effectively utilize the facility. The FY 1990 budget request, however, includes $225,000 for the station, a reduction from the FY 1989 appropriated level of $390,000.

The studies undertaken with the additional funds provided in FY 1989 will evaluate nutritional requirements for optimal trout and salmon survival in restoring and mitigating losses of salmonid populations in the Columbia River Drainage.

Why does your budget continually reject efforts to restore and mitigate losses in the Columbia River Drainage?

Answer: The Service is committed to the restoration and mitigation of fishery losses in the Columbia River drainage. Long term studies in restoration and mitigating losses of salmon populations in the Columbia River drainage will continue in 1990.

Question: Was the original intent of these funds to hire additional biologists?

Answer: Yes. The original intent was to provide funding to bring the laboratory to full operating capacity, including the hiring of two additional staff--a biologist and a technician.

Question: If so, why isn't there an FTE decrease associated with the proposed budget reduction?

Answer: Additional FTEs were not provided with the Congressional funding increase. The Service anticipated that additional staff could be accommodated within FTEs assigned to the laboratory.

Snake River Fish Restoration

Question: In 1955, the Idaho Power company was licensed to construct a three dam complex, consisting of Brownlee, Oxbow, and Hells Canyon hydroelectric dams on the Middle Snake River. Fish passage facilities were originally incorporated into this complex, but were abandoned after failing to function as originally anticipated.

Since construction of these dams, much has been learned about fish protection, resource enhancement, and mitigation of losses due to dam construction. New information is now available on the behavior of migrating adults and smolts.

To capitalize on this increased knowledge, $60,000 was added in FY 89 to coordinate a symposium involving diverse interest groups to explore the feasibility of restoring anadromous (fish) to the Snake River Basin (pg. 213). Can you bring me up to date on this symposium? When is it tentatively scheduled? Tentative Agenda?

Answer: The Service has organized a Snake River anadromous fish workshop which is scheduled for August 8-9, 1989 in Boise, Idaho. The tentative agenda for the workshop is attached.

Question: Have the outside groups been enthusiastic?

Answer: Yes, the outside groups were enthusiastic. The workshop agenda was developed by a steering committee composed of representatives from the Bureau of Reclamation, U.S. Army Corps of Engineers, Idaho Power, Columbia River Intertribal Fish Commission, Idaho Fish and Game, and the U.S. Fish and Wildlife Service. We also plan to invite the Northwest Power Planning Council, the National Marine Fisheries Service, the U.S. Geological Survey, the Bureau of Land Management, the Shoshone/Bannock and Nez Perce Indian Tribes and the Bureau of Indian Affairs as well as the general public to participate in the workshop.

Question: Does the plan include some sort of analysis relating to the costs of restoring the anadromous runs?

Answer: The workshop will bring together the experts from multi-discipline areas to explore the technical feasibility of restoring or establishing the anadromous fish runs in the Middle Snake River above Brownlee Dam. General costs relating to restoration will be during the workshop.

Question: What can you tell me now about the feasibility of restoring the runs?

Answer: The technical feasibility of restoring or establishing the anadromous fish run above Brownlee Dam appears promising. We hesitate to presuppose the technical conclusions of the workshop regarding the feasibility of restoring anadromous fish above the three dams on the Middle Snake River. Some examples of options that will be explored in detail at the workshop are:

1. Fish Passage: Fish passage for adults and smolts at each of the three dams.

2. Hatchery Haul: Adult fish would be captured below Hells Canyon Dam. Those needed for brood stock wold be hauled to a hatchery and the excess hauled to desirable fishing areas upstream from the three-dam complex. The smolts produced in the hatchery would be released below Hells Canyon Dam.

3. Collection and Bypass: Collect adults below Hells Canyon Dam and haul them to the "head" of the Brownlee pool from which they would continue their migration for spawning and to provide fishing opportunities. The smolts would

be captured upstream from the troublesome Brownlee pool and transported to a site downstream from Hells Canyon Dam for release.

4. Collection and Bypass to Tributaries: Same as 3. except smolts are to be collected in the tributaries and transported to a site downstream from Hells Canyon Dam.

PROPOSED PROGRAM FOR ANADROMOUS FISH WORKSHOP

Boise, Idaho

August 8-9, 1989

Workshop Objective - Conceptualize the possibility of introducing salmon and steelhead in streams above Hell's Canyon, Oxbow and Brownlee Reservoir.

Day 1

I. Introductory Session

12:00 Noon - 12:20 Explanation of workshop purpose, ground rules and introduction of the FWS Director, who will introduce U.S. Senator McClure---Carl Armour, FWS National Ecology Research Center

12:20 - 1:00 Keynote Address---Senator McClure

1:00 - 1:15 Historical overview of the status of salmon and steelhead runs above Brownlee Reservoir---Jim Haas, Oregon Department of Fish and Wildlife, Retired

1:15 - 1:30 Break

II. Technical Session (Bill Miller-Chairman)--FWS Dworshak Fisheries Assistance Office

A. General

1:30 - 1:45 Explanation of objectives for the session and the ground rules---Bill Miller

1:45 - 2:00 Viewpoint of Idaho sport fishing interests---Speaker to be determined*

2:00 - 2:15 Viewpoint of Oregon sport fishing interests---Speaker to be determined*

2:15 - 2:30 Break

2:30 - 2:45 Viewpoint of Shoshone/Bannock Tribe---Speaker to be determined

2:45 - 3:00 Viewpoint of Nez Perce Tribe---Speaker to be determined

3:00 - 3:15 Viewpoint of Shoshone/Piute Tribe---Speaker to be determined

3:15 - 3:30 Viewpoint of Idaho Fish and Game---Dexter Pitman, Idaho Fish and Game

3:30 - 3:45 Viewpoint of Oregon Fish and Game Speaker to be determined

3:45 - 4:00 Discussion for Session II.A** (Bill Miller-facilitator)

Day 2

B. Production potential (Natural and hatchery production of smolts and adults)

8:30 - 8:45 Mainstream of the Snake River---Charles Petroski, Idaho Fish and Game

8:45 - 9:05 Idaho Tributaries---Charles Petroski, Idaho Fish and Game

9:05 - 9:25 Oregon Tributaries ---Mary Hansen, Oregon Department of Fish and Wildlife

9:25 - 9:45 Discussion for Session II.B (Bill Miller-facilitator)**

9:45 - 10:00 Break

C. Smolt and Adult Passage Considerations

10:00-10:30 Smolt passage technology---Donn Parks, National Marine Fisheries Service

10:30-10:45 Discussion for smolt passage technology (Bill Miller-facilitator)*

10:45-11:00 Adult passage technology---Wes Abel, Oregon Department of Fish and Wildlife, Retired

11:15-11:30 Discussion for adult passage technology (Bill Miller-facilitator)**

D. Establishing Fisheries Above Brownlee

11:30-12:30 Options for getting smolts and adults to designated streams---Terry Holubetz, Idaho Fish and Game

12:30-1:30 Lunch

1:30 - 1:45 Discussion of options (Bill Miller-facilitator)**

III. Other Technical Considerations (Roy Heberger-Chairman--FWS Boise Field Office)

A. Adjudication

1:45 - 2:30 Snake River---Keith Higginson, Idaho Department of Water Resources

B. Improved Outmigration Flows for Smolts and Idaho Power Fisheries Program

2:30 - 2:50 Galloway project and implications for Brownlee---Cliff Fitzsimmons, U.S. Corps of Army Engineers

Second Day Continued

2:50 - 3:05 Break

3:05 - 3:35 T.E. Roach Complex annual hydrograph---Scott Larrando, Idaho Power

3:35 - 3:55 Idaho Power fishery program and existing mitigation---Larry Winer, Idaho Power

3:55 - 4:15 Discussion for Session III.B. (Roy Heberger-facilitator)

IV. Wrapup

7:00 - 7:15	Summary of technical highlights and ground rules for technical discussion---Charles Koski-facilitator, National Marine Fisheries Service
7:15 - 7:45	Discussion of technical information for previous Sessions---Charles Koski-facilitator**
7:45 - 9:00	Public comment---(Carl Armour-facilitator)***
9:00 - 9:30	Workshop summary---Gary L. Hickman, Research and Development, Washington D. C.

*Speaker to represent groups in state
**Confined to participation by technical experts
***Public will be given the opportunity to ask questions and to make statements

Swan Falls

Question: The Swan Falls studies required pursuant to Public Law 100-216 are being implemented. It is my understanding that to avoid start-up delays, the Service is making internal adjustments to begin the instream flow studies, habitat evaluation studies and river profiling to partially fulfill the FY1989 commitment. The law is essentially an agreement between the State, the Fish and Wildlife Service, the National Marine Fisheries Service and some outside organizations. Unfortunately, the Service has not requested the necessary $555,000 in FY1990 to continue these studies. Why are you walking away from an agreement made less than a year ago?

Answer: The Service and the Department remain committed to the agreement. Although the law places responsibility for the Swan Falls studies on the Department of the Interior, the Service has taken the lead in scoping the studies and in securing funding since a major part of the effort affects the Deer Flat National Wildlife Refuge. The Service is seeking funding with diligence and is committed to the completion of the Swan Falls studies. The Service is internally adjusting staff assignments to avoid delays and conduct the flow studies and habitat evaluations. The instream flow studies require 3 years for completion and should be completed as soon as possible in order to meet the 1992 filing date for Federal reserve water rights. The Service is also trying to acquire support from all cooperating Interior bureaus. The major effort on these studies will be in Fiscal Year 1990 and the Department will need to identify funds to meet its remaining obligations to continue and complete the studies. It is estimated that an additional $450,000 and 4 additional FTE are necessary in Fiscal Year 1990 to continue the studies.

Question: Should the other groups and agencies take the zero request as a signal of the Service's overall support?

Answer: The Service is committed to completion of the studies and has already begun the Habitat Evaluation Procedures and Instream Flow Incremental Methodology Study. The Service will spend approximately $164,500 of existing Fiscal Year 1989 funds for this work. In addition, $20,000 was used to purchase and install equipment and a literature search.

Question: What was your request for these funds of the Department? Of OMB?

Answer: The Service has made no formal request of the Department or OMB for funds. However, the Service is working with other Interior bureaus to seek their assistance in meeting the requirement of the study. The Service is considering requesting that the Secretary seek support from other Interior bureaus. The Service has requested that the Bureau of Land Management provide one staff member to assist in the Habitat Evaluation Procedures study. Some funding and staff support for the Instream Flow Incremental Methodology study from the Bureau of Indian Affairs may be appropriate if it has any tribal interest in securing flows for the white sturgeon. Furthermore, since the U.S. Geological Survey has the principal expertise to complete one of the major studies, the river profiling study, some funding and manpower assistance from that agency may be necessary.

QUESTIONS SUBMITTED BY SENATOR J. BENNETT JOHNSTON

Natchitoches National Fish Hatchery

Question: The Administration's Fiscal Year 1990 budget indicates that the Natchitoches Fish Hatchery is scheduled to receive $247,000 in Fiscal Year 1990 as opposed to $299,000 in Fiscal Year 1989. Under this proposed budget, which activities would sustain a cut in funding?

Answer: The funding level, including hatchery maintenance, for Fiscal Year 1989 is $299,000. In Fiscal Year 1989, $74,000 was provided above base funds for hatchery maintenance projects. In Fiscal Year 1990, it is anticipated that $14,000 will be allocated above base funds for cyclical maintenance projects, bringing total Fiscal Year 1990 funding to $261,000. Although the reduction of $38,000 in FY 1990 will result in no funding being available to provide electrical hook-up to ponds, there will be no decrease in fish production.

Question: I understand the Natchitoches Fish Hatchery needs additional funding to further assess the condition of paddlefish resources in Louisiana and Texas, to intensify assistance activities on restoration of Gulf Coast striped bass, and to continue development and implementation of fishery management plans on National Wildlife Refuges and other Federal lands. How much money is needed for each of these activities? Please rank these activities in their order of priority.

Answer: The Fisheries Assistance Office at Natchitoches National Fish Hatchery is responsible for a five State area (Mississippi, Arkansas, Alabama, Louisiana, and Western Tennessee). All activities identified are considered important to the Service in meeting its fisheries responsibilities. To carry out each activity identified above at its optimum level would require additional funding and personnel as follows:

Priority	Project	Funds/FTE
1	Striped bass restoration	$48.0/1 FTE
2	Fishery management on National Wildlife Refuges	$52.0/1 FTE
3	Paddlefish restoration	$20.0/0 FTE

Pintail Duck Wintering

Question: I understand that pintail populations are at an all time low and are being worsened by wintering habitat conditions. What steps has the Service taken to identify issues related to pintail wintering grounds along the Gulf Coast of Texas and Louisiana?

Answer: There is inadequate information available on both the wintering ecology and population dynamics of the pintails. However, the primary management needs for the continental pintail populations are to maintain wintering habitat conservation efforts in the Central Valley, California and the Gulf Coast area, and to protect remaining wetland breeding areas in the Prairie Pothole region. The Gulf Coast joint venture, initiated through the North American Waterfowl Management Plan, has identified the coastal habitat of Texas and Louisiana as high priority and targeted a minimum of 386,000 acres for protection and enhancement for wintering pintails. In addition, Service activities under authority of the Food Security Act of 1985 (Farm Bill) are continuing to assist private

landowners to enhance their agricultural lands as wintering waterfowl habitats in a cooperative Federal/private effort. The role of natural wetlands, rice and other croplands in Texas and Louisiana in the dynamics of pintail populations is not known.

Question: Does the Service have adequate resources to conduct the required research to address those issues?

Answer: No. Pintail research studies will continue in FY 1990 on winter survival and habitat use in California's Sacramento Valley, analyses of existing data on nesting success in the North American prairies, and statistical examination of current band returns ($200,000). However, additional priority information needed to maintain pintail populations will require funds for studies of breeding ecology in Alaska ($250,000) and winter mortality and habitat use, both along the Louisiana/Texas/Mexico Gulf Coast ($250,000) and in Southern California ($300,000).

Bayou Sauvage NWR

Question: I was very disappointed to learn that the Service has transferred the unobligated balance for land acquisition at Bayou Sauvage NWR ($7,750,000) and construction at Bogue Chitto NWR ($1,606,000) to cover the cost of last year's fires. Section 102 of the Forest Service Administrative provisions of the Department of the Interior and Related Agencies Appropriations Act requires that any action such as this that is taken by the Secretary should be followed by a supplemental request to replenish the accounts from which the funds have been borrowed. To date, I am not aware of any such request being received on the Hill. Have you submitted such a request? If so, when? If not, what is your legal basis for not doing so?

Answer: An FY 1989 supplemental request was submitted to OMB by the Department on October 25, 1989, to replenish remaining land acquisition and construction funds which were borrowed for firefighting purposes in FY 1988. Due to the overall fiscal and related concerns at the time of former President Reagan's FY 1990 Budget, the Administration decided not to forward the supplemental request to Congress.

The Administration had concerns at the time about the constitutionality of that portion of Section 102 that states that "...all funds used pursuant to this section must be replenished by a supplemental appropriation which must be requested as promptly as possible." It was their view that under the Constitution, the Administration cannot be required to submit legislative recommendations to Congress contrary to the wish of the President. Thus the President has discretion to decide when he should propose legislation, including appropriations requests, and the contents of such proposals.

Question: As you know, the Service has run into some unanticipated problems in acquiring land at Bayou Sauvage; however, those problems have either been resolved or are well on their way to being resolved. I believe that your actions on this matter demonstrate bad faith in going forward with this important project and I hope that we can have better cooperation in the future, beginning with a request from the Department to restore the necessary funding.

Answer: Progress on land acquisition at Bayou Sauvage has been delayed as a result of two major factors. First, the deteriorated condition of the Maxent Canal Levee and the substantial costs to repair it precluded Service purchase of the property. The Maxent Canal Levee forms the western boundary of the proposed Bayou Sauvage National Wildlife Refuge. The levee protects developed lands from storm waters to the west of the refuge. It is seriously in need of repair. The Service has taken the position that it will not acquire the levee and the potential liability it presents. Presently, the Maxent Canal Levee is privately owned, and the Service has no authority to rehabilitate and maintain it. The Service believes it would be unwise to purchase the levee in its present state of disrepair. Congressional authorization would be required for the Service to take action on the Maxent Canal Levee.

Outer Continental Shelf Drilling Activities

Question: Each year during consideration of the appropriations bill for the Department of the Interior, we spend an enormous amount of time debating whether and to what extent we should place a moratorium on drilling activities on the outer continental shelf. Volumes of studies have been conducted on the environmental aspects of drilling. What do these studies show with respect to actual risk caused by drilling activity to our fish and wildlife resources?

Answer: While there is concern relative to the impacts of routine oil and gas development activities such as the use of drilling muds and the impact of secondary development, studies conducted in areas where OCS oil and gas activities have occurred do not indicate long term impacts, with exception of wetland losses in Louisiana. However, the Service's primary concern is with the impacts of a catastrophic event associated with oil and gas activities, such as the Exxon Valdez incident. The record indicates that in the United States, the majority of such events have been transportation related.

Question: Can you cite any specific study that has been conducted on areas under actual consideration by the Department for leasing, including areas off of California, Florida and Alaska, that shows that drilling and exploratory activities will cause a significant risk of serious damage to the coastal and marine environment? If so, summarize the findings and provide me with a copy of the study.

Answer: A study, conducted by the Minerals Management Service (MMS), on Flower Garden Banks, a coral reef in the Gulf of Mexico indicated that oil and gas activities can be carried out in sensitive areas with proper mitigation. While offshore development per se might not create a significant impact to the resource base, the potential for a large spill and the impacts such a spill would have is the focus of the Service's concern. Service evaluation of potential impacts is based on site-specific resource studies, information contained in the Environmental Impact Statement for a particular sale, other pertinent resources information, MMS risk models and the information we have reviewed relative to the impact of oil spills throughout the world. In areas such as the Florida Keys and in some areas of Alaska with a rich resource base, the potential impacts of a catastrophic spill are significant. We believe that such impacts must be addressed despite a low risk of occurrence. The focus of the Service's concerns then is not the likelihood of a catastrophic event, but rather the impacts of its occurrence.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

Vermont Cooperative Fish and Wildlife Research Unit

Question: Is the Service actively working to implement the language in the FY 1989 Interior Appropriations law that resulted in an agreement to establish a new Fish and Wildlife Cooperative Research Unit at the University of Vermont?

Answer: Yes, the Service is working to implement the language in the FY 1989 Interior Appropriations law to establish one new Unit; the State of Vermont was the first to develop a fully coordinated request for a Cooperative Fish and Wildlife Research Unit, and was selected for a new Unit. The Cooperative Agreement has been signed and the position for the Unit Leader will be announced shortly.

Question: Has the Memorandum of Understanding establishing the Vermont Unit been signed by the Service, the University of Vermont and the State of Vermont Fish and Wildlife Department? If not, is the signing of the agreement by all three parties imminent?

Answer: The Cooperative Agreement establishing the Vermont Unit has been signed by the cooperating entities, the Fish and Wildlife Service, the State of Vermont, and the University of Vermont.

Question: Are sufficient funds available in the Service's FY 1990 Budget request to insure that the Vermont Unit will receive a full $200,000 allocation to allow it to operate at full strength, that is, with three research scientists on staff?

Answer: No. As described in the FY 1990 Budget Justifications, the Vermont Unit is planned to be one of at least six Units affected by the proposed $500,000 reduction from the FY 1989 Congressional increase. Our plan is to hire a Unit Leader during FY 1989, but hold vacant the two Assistant Leader positions during FY 1990.

Question: If such funds are not available in the Service's budget request, how much additional funding will be required for the research account of the Service's FY 1990 Budget to staff the Vermont Unit at its full strength of three scientists?

Answer: In FY 1990, the Cooperative Fish and Wildlife Research Units program will require an additional $1,300,000 if all approved vacancies were filled. This additional funding level would allow the Service to complete staffing of all vacancies at combined Units, including those at the Vermont Unit. The additional cost of completing staffing for the Vermont Unit is $120,000.

Question: I will look forward to receiving your report on the status of the Vermont Cooperative Unit.

Answer: We are pleased to report the above information on the status of the Vermont Cooperative Fish and Wildlife Research Unit.

QUESTIONS SUBMITTED BY SENATOR DENNIS DeCONCINI

Cap on Wallop-Breaux and Pittman-Robertson Funds

Question: In the Fish and Wildlife Service's FY 90 budget justification, there is a proposed cap of $100 million for experditure of Federal Aid in Sport Fish Restoration (Wallop-Breaux programs) and Federal Aid in Wildlife Restoration (Pittman-Robinson programs) funds.

What do you anticipate the impact to be on states' ability to manage their sport fishing and wildlife resources with the proposed cap on Wallop-Breaux and Pittman-Robinson funds?

Answer: We are pleased that the States have been able to effectively utilize the Federal aid programs, and in keeping with his prior support for these programs, the President has directed the Office of Management and Budget, in its consultations with the Congress, to take the position that there should be no caps on the fish and wildlife programs of the Wallop-Breaux Trust Fund and the Pittman-Robertson Special Fund.

Question: Do you have specifics for Arizona?

Answer: Federal Aid program funds are allocated among the States based on statutory formulae. In fiscal year 1989, Arizona was allocated $3,869,267 for Sport Fish Restoration and $2,663,185 for Wildlife Restoration. Since there will be no cap on these program funds in FY 1990, the estimated allocation to Arizona is $3,910,000 for sport fish projects and $2,653,000 for wildlife projects.

Question: Are there requests for funds from these programs pending?

Answer: Arizona submits project proposals to our Regional Office in Albuquerque, New Mexico at the start of each fiscal year in the amount of their estimated allocation. Requests for FY 1990 have not yet been received. Currently, Arizona uses their funds to support on-going fish and wildlife programs. The projects in Arizona are anticipated to continue in FY 1990.

Endangered Species Grants-to-States

Question: Does the Service view the elimination of Section 6 endangered species funding as conflicting with the implied promises of the 1973 Endangered Species Act which supersedes State authority over endangered species in return for grants to manage the depleted resources under Federal review?

Answer: Section 6 of the Endangered Species Act directs the Secretary to cooperate to the maximum extent practicable with the States for the purpose of conserving threatened and endangered species, and enter into cooperative agreements with States that demonstrate active and adequate programs. Funds may be provided to assist the State through grant-in-aid. As States increase their capability to manage and conserve endangered species, the need to Federal assistance decreases.

Question: What are the motivating factors for the elimination of Section 6 funding for endangered species grants to States?

Answer: The motivation for eliminating this grant program is to transfer the responsibility for funding certain State endangered species programs to the individual States. The Service believes this will result in an efficient saving of limited Federal funds.

Question: Does the Service have an indication at this point in time on how many endangered species programs that States are currently undertaking will be discontinued because of the elimination of Section 6 endangered species fund?

Answer: The Service has used the cooperative grant program in the past as an incentive to promote active State involvement in endangered species activities. At the present time, 48 States and 3 territories have cooperative agreements for animal species. Of those, 35 States and 1 territory also have cooperative agreements for plant species. The funding levels sustained over the past 12 years have accomplished this aim to a large extent, and now, with the States actively oriented toward the preservation and conservation of endangered species, they are being encouraged to fund priority operations in the future. As one means of carrying on this work, many States have established nongame wildlife programs. With regard to an accurate assessment of how many programs will be curtailed in any of the currently cooperating States, the Service believes that opportunities exist (e.g., grants from private individuals and corporations) for the States to secure additional resources to continue their endangered species program at reduced levels.

Question: Do you anticipate States becoming less inclined to participate in endangered species programs because of the elimination of Section 6 endangered species funds?

Answer: We anticipate that highest priority programs that are ongoing will be continued. Some States may be less inclined to initiate new programs or negotiate new cooperative agreements.

Law Enforcement

Question: I see that the Service has requested an increase of $1 million for initial start-up costs for a national drug control program. What is the scope and extent of illicit drug activity on Service lands?

Answer: In 1987, the Service reported the eradication of 2,632 marijuana plants on eight National Wildlife Refuges and four drug related arrests. In 1988, the Service reported 11 drug interdictions including eradication of 1,157 marijuana plants from 11 National Wildlife Refuges, 64 arrests, and 39 citations resulting in the eradication or seizure of over $3,421,000 worth of drugs. The possession, use, cultivation, smuggling, and transportation of narcotics appears to be increasing on Service lands.

Question: Do you have any specifics for Arizona refuges?

Answer: Within the last 5 years, the most significant illicit drug activity on Service lands in the Southwest in general, and in Arizona in particular, has focused on smuggling. There are reports of smuggling activity on all three of the Arizona border wildlife refuges and apprehensions have been made by Border Patrol, Customs, Drug Enforcement Administration, etc. There have been 35 drug arrests on or adjacent to Buenos Aires National Wildlife Refuge since its establishment in 1986. Drug smuggling is a significant on-going problem at both Buenos Aires and San Bernardino Refuges.

Question: Does the Service have an implementation plan and time table for the Drug Control Program?

Answer: Yes, the Service does have an implementation plan. The plan includes national coordination through the Service's Law Enforcement Division to ensure complete, accurate, and timely reporting of all drug related law enforcement activities; training which would be provided on a basic level as well as yearly refresher courses and specialized training for all refuge officers, wildlife inspectors, and special agents; aircraft support for surveillance and use of public affairs services for making the public aware of our anti-drug commitment as well as publicizing the accomplishments of the Fish and Wildlife Service.

If funded, special equipment such as night vision scopes, cameras, movement sensors, and safety gear could be ordered within 60 days. Larger equipment such as vehicles and watercraft could be ordered within 90 days. If FTEs are allocated, the personnel could be selected within 4 to 6 months. Training would be scheduled as soon as possible at the Federal Law Enforcement Training Center in Glynco, Georgia, or through private contractors.

Question: The FY 90 budget justification indicates that the additional funding requested for the Service's drug control program is for the "initial start-up costs." Does the Service anticipate using other federal, state and local law enforcement agencies --- who already possess law enforcement resources and criminal intelligence --- for drug control on Service lands? If so, do you anticipate making a portion of this funding available to state and local agencies commensurate with their participation in the Service's drug control efforts?

Answer: The Service already works jointly with local law enforcement agencies on all types of crime within Service jurisdiction and will continue to do so. The requested funding level is needed to support the Service's new program. It will provide the minimum level for equipment and training to Service officers. Monies for cooperative efforts will continue to be available to local law enforcement offices through the Department of Justice.

Buenos Aires National Wildlife Refuge

Question: It is my understanding that the visitor center at the Buenos Aires National Wildlife Refuge is in need of major renovations, including new plumbing, wiring, heating, and cooling. Also, the entrance road leading to the refuge is in need of extensive repairs. Does the Service have a cost estimate for the renovation of the Buenos Aires National Wildlife Refuge visitor center?

Answer: The estimated cost is $465,000 for the visitor center restoration. Other costs would encompass the entrance road renovation, the tour loop, and the interpretive program development with provision for public use facilities. The total estimated cost is $1,000,000.

Question: Is there sufficient funding in the FY 90 budget to undertake this work?

Answer: No, funding has not been requested for this work.

Question: Does the Service have a cost estimate for the repairs to the entrance road for the refuge?

Answer: Repairs to the two-and-a-half mile entrance road which leads to the office/visitor center complex have been estimated to total $250,000.

Question: In its current condition, does this road pose a safety hazard to employees and visitors to the Refuge?

Answer: The-two-and-a-half mile entrance road is a narrow earth surface ranch road, composed of loose gravel, sandy gravel, and compacted sand. Although the road does not pose a critical safety hazard to employees and visitors, the road surface, which lacks appropriate base and surface coverage, becomes soft when wet, making travel along the roadway difficult. The existing road also lacks road shoulders.

Masked Bobwhite Quail

Question: In the FY 90 budget justification, I see that the funding for the masked bobwhite quail program has been eliminated. How will this affect the Service's ability to reestablish the masked bobwhite quail on Service lands?

Answer: Reduced funding for the masked bobwhite quail in the Fiscal Year 1990 budget would affect the overall recovery and reestablishment of this subspecies on Service lands (the Buenos Aires National Wildlife Refuge). Follow-up monitoring studies of released masked bobwhite quail to determine the habitat utilization of released birds would not be continued. The endangered species management program is beginning to bring positive results on the refuge and a decline in this progress could affect the population. The Fiscal Year 1990 Service budget proposal provides for $30,000 to construct new rearing pen facilities to rear coveys prior to release. A coccidiosis outbreak occurred last year in the old pens which are inadequate to safely handle birds and avoid disease outbreaks.

Question: Does the elimination of this program indicate that the population of the masked bobwhite quail have reached a level so that it is no longer a threatened and endangered species? If not, why is the Service proposing to eliminate the masked bobwhite quail program?

Answer: The reduction of $28,000 in the Fiscal Year 1990 masked bobwhite quail funding does not mean that the program has been eliminated. Funds will not be available for temporary personnel to monitor the natural and introduced populations of the quail. Monitoring will be accomplished with permanent staff within current workload demands. Operation of the Buenos Aires National Wildlife Refuge for the benefit of this endangered subspecies will continue.

Cabeza Prieta National Wildlife Refuge

Question: It is my understanding that there is currently underway a study of the Sonoran pronghorn antelope population on the Cabeza Prieta National Wildlife Refuge. What is the status of that study?

Answer: Cabeza Prieta National Wildlife Refuge has the responsibility for coordinating recovery efforts for the Sonoran pronghorn antelope. The refuge has initiated a study with the University of Arizona to monitor and investigate the biological needs and limiting environmental factors which impact the population levels. Work covers an inventory of forage base and usage study, pronghorn distribution, impacts of disturbance, diet analysis, and water use.

Question: Is there sufficient funding in the FY 90 budget for it to continue? If not, what level of funding is required to allow this study to proceed?

Answer: Base funding for refuge operations and maintenance does not cover the cost of the study. An estimated $50,000 is required in Fiscal Year 1990 to continue research efforts, including extended monitoring of pronghorn movements, accumulation of additional data describing forage abundance, identification of dietary needs of the antelope, and delineating environmental factors now limiting the population which may be alleviated through management actions.

Question: What is the status of the comprehensive visitor educational and interpretive area proposed for the Cabeza Prieta National Wildlife Refuge? Please provide me with the details of this proposal. Is there sufficient funding in the Fiscal Year 1990 budget to proceed with this proposal? What is the cost estimate of this proposal?

Answer: Funds were not requested for this project in Fiscal Year 1990. The project was designed to provide a representative cross-section of the extensive 860,000-acre refuge to those winter-season visitors not equipped to travel the exceedingly rough refuge roads. A short interpretive trail near the refuge headquarters with identified desert vegetation, a demonstration site, and a wildlife watering site with a photography blind and lights suitable for night viewing are the major components of the proposal. Estimates to complete planning of this project total $35,000 and construction would require an estimated additional $150,000. If the planning was funded and completed in FY 1990, it is not likely that construction could start until FY 1991.

Question: What is the status of the interpretive displays in the visitor center of the Cabeza Prieta National Wildlife Refuge?

Answer: The existing visitor center interpretive displays are of a temporary nature. Funding to complete the design and construction of permanent displays has not been requested.

Question: Does the Service have costs estimates on what it will take to improve these permanent dsplays?

Answer: The cost estimate to complete the design and construction of permanent displays is $50,000.

San Bernardino National Wildlife Refuge

Question: I understand that there currently is no electrical service to this refuge. What is the status of the efforts to bring electricity to this refuge?

Answer: The Service has met with Congressman Jim Kolbe and representatives of electrical suppliers and potential users in the San Bernardino Valley. The objective of these meetings has been to explore potential avenues of supplying electrical service to 10 ranches and the San Bernardino National Wildlife Refuge.

A diesel generator is currently used to provide limited electrical power at the San Bernardino National Wildlife Refuge maintenance building. Electrical service would enhance safety through the use of telephones, base station radios, electronic security systems and air conditioning. The building, located near the U.S./Mexico border, is metal and interior temperatures exceed the General Services Administration standards for Federally occupied buildings.

Question: Is there sufficient funding in the FY 1990 budget to accomplish this? If not, what level of funding would be required?

Answer: The Fiscal Year 1990 operations and maintenance budget for the refuge cannot support this expense. Approximately $250,000 would be required to bring electricity to the refuge.

Mount Graham Red Squirrel Study

Question: In the FY 1989 Interior Appropriations Senate Report, language was included that directed the Service to devote additional resources to the study of various threatened and endangered species, including the Mount Graham red squirrel. Has the Service devoted additional resources to the research on the Mount Graham red squirrel?

Answer: The Fish and Wildlife Service (Service) and the Forest Service are funding a two-year study of productivity rates, home range, and juvenile dispersal of red squirrels through the Arizona Cooperative Fish and Wildlife Research Unit in Tucson. One year of the study was completed in 1988. The study will continue in the spring of 1989 with the capture and tagging of animals.

The Service is an active cooperator with the Forest Service in conducting surveys for red squirrel middens (food caches) and population levels.

The Service is providing carcasses of red squirrels to the University of New Mexico to support the study of genetics of southwestern United States red squirrels. To date, two road-killed and one natural mortality red squirrel carcasses have been provided.

Question: If not, why? If so, what has been the findings of this research?

Answer: The research is continuing and at present no definite results are available.

Question: Is there sufficient funding in the FY 90 budget to allow the research on the Mount Graham red squirrel to continue?

Answer: There is no funding in the Services' Fiscal Year 1990 budget for research on the Mount Graham red squirrel. The draft "Mount Graham International Observatory Management Plan" specified that the University of Arizona would provide funding for research in the amount of $60,000 a year for the first 2 years, and between $50,000 and $60,000 a year for an additional 8 years.

Question: If not, what level of funding would be required to proceed with this research?

Answer: The Service considered the level of funding which will be provided by the University of Arizona as specified in the management plan adequate for the proposed research. Therefore, the Service has not requested funding to conduct research on the Mount Graham red squirrel.

A recovery team is presently being appointed which will draft a recovery plan. That plan may identify research areas that are not the responsibility of the University, thus the Service may require funding in the future.

Question: Is there an implementation plan and timeline for the research to be done on the Mount Graham Red Squirrel?

Answer: A draft management plan has been produced by the Forest Service as required under Section 604 of the Arizona-Idaho Conservation Act of 1988. This plan contains a ten-year timeline for conducting the research. The timeline will commence on the effective date of the agreement between the Forest Service, the University of Arizona and the Fish and Wildlife Service. The effective date of the agreement is expected to be sometime during Fiscal Year 1989.

Question: What were the results from the Mount Graham red squirrel population survey that was conducted in FY 88?

Answer: The U.S. Fish and Wildlife Service, in cooperation with the Forest Service and Arizona Game and Fish, conducted a survey for active red squirrel middens (food caches) on October 15- 17, 1988. The fall red squirrel population estimate, based upon the number of active middens, is 228 q 63 (optimistic) or 178 q 62 (conservative). This does not differ appreciably from spring 1988 estimates of 207 q 50.

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Migratory Waterfowl Programs

Question: On page 14 of the FWS budget justification, it states that "the Service has made significant progress in the education and information program related to Arctic geese" yet it proposes to delete the $400,000 increase that was added last year for this initiative. On page 88, it indicates that "funding is adequate for operation of (the Arctic nesting geese program), but on page 101, it asserts that the $400,000 appropriation provided in FY89 "will allow projects critical to increasing Arctic nesting geese populations to continue." Why is it that the Arctic nesting goose program was critical in FY89, but now the Service asserts that the add-on is not necessary?

Answer: In Fiscal Year 1989, $400,000 was added to refuge operations and maintenance funding for the information and education effort on Arctic geese. Of this amount, $100,000 is being used to develop statewide information and education products. The remaining $300,000 allows collection and analysis of subsistence information, and implementation of additional management efforts that will provide benefits beyond the current year. The base funds in FY 1990, totaling $350,000, will continue to be applied to accomplish information and education goals critical to the program over the next several years.

Question: On page 101 it also indicates that the goose education project will be expanded from the Y-K Delta to become a statewide program. This expansion makes good sense when viewing the map on page 129 of the budget justification which shows that out of 34 critical bird habitat areas in North America, seven are located in Alaska including six areas outside the Y-K Delta. How do you intend to expand a program while cutting its funding level at the same time?

Answer: Information and education goals will be accomplished at a statewide level through base funds. As was initiated in 1989, the Service will continue to pursue these efforts to develop information and education products that have statewide application rather than being focused on the Delta and its residents.

Pintail Duck Research

Question: On page 88 of the budget justification, it indicates that the pintail duck research program "can be continued at a reduced funding level". The President's budget request proposes a $250,000 reduction in this program. Yet on page 110, it indicates that "populations of pintail ducks in North America have declined markedly in recent years and are well below objective levels identified in the North American Waterfowl Management Plan." How do you justify reducing the pintail duck research program at a time when the species is declining markedly?

Answer: Results obtained from studies on pintail population status and reproduction in Alaska with $250,000 added by Congress in Fiscal Year 1989, will be incorporated into the ongoing management program carried out with existing base funds. Studies on pintail ducks will be continued at reduced level of funding. As long as the overall level of funding for Interior appropriations is consistent with allocations pursuant to the Bipartisan Budget Agreement and resulting Budget Resolutions, we would have no objections to this increase from a budgetary standpoint.

Question: On page 15 of the FWS budget justification, an increase of $2.4 million is requested for implementation of the North American Waterfowl Management Plan. According to the document, "a diversity of activities will be undertaken for conservation and enhancement of key waterfowl habitat, nationwide..." What plans does the Service have for implementing the Plan in Alaska?

Answer: The $2.4 million increase requested will fund work in the Central Valley, Prairie Pothole Area, the Gulf Coast, Lower Mississippi Valley, and the Atlantic Coast/Great Lakes/St. Lawrence Basin. As a first step in implementing the North American Waterfowl Management Plan in Alaska, the Service intends to identify the potential for conservation and enhancement initiatives in the State. The Service will sponsor a series of meetings during Fiscal Years 1989 and 1990 to discuss the relationship of the Plan to Alaska. These meetings will provide a foundation for future initiatives that may include protection of important habitats, subsistence harvest surveys, harvest management, research, or establishment of selected intensive management areas.

Refuge Operations

Question: On page 14 of the FWS budget justification, the Service indicates its intention to reduce funding for Alaska refuge operations by $500,000. Page 88 indicates that "base funding is adequate to fund the Alaska refuges operations." Yet on page 100 in discussing Alaska refuge operations, it indicates that the Service completed 16 refuge management plans as of November 18, 1988 and now begins the task of "implementing the management directives set forth in all 16 conservation plans." These plans cannot be implemented with a reduction of funding. How do you square an increased workload with a cut in funds?

Answer: Implementation of management plans will be carried out at a reduced level within base funds presently available to Alaska refuges.

Question: How do you explain that the Alaska Region has management responsibility for 85 percent of the National Refuge System, yet it only receives 9 percent of the management and research funds?

Answer: The Alaska Region receives 16% of the Refuge Operations and Maintenance funding. That is, of the total $117,281,000, Alaska receives $18,821. Additionally, the land base is not directly related to the need for operational funds, as many of the refuges in Alaska do not require intensive management. National Wildlife Refuges outside of Alaska generally have responsibility for more intensive land management activities such as farming and water level management. These refuges also often have higher public use related costs as well as more fences, signs, roads, and other facilities to maintain. In addition, the land base is not directly related to the need for operational funds.

Question: How can you justify a $500,000 reduction in light of this inequity?

Answer: The $500,000 reduction will require that the highest priority work be accomplished on Alaska refuges in Fiscal Year 1990. We will continue to provide basic resource protection and administration and meet mandated responsibilities with available funds.

Non-game Birds

Question: The President has requested $2.5 million to study non-game birds. On page 186 of the budget justification it indicates that "emphasis on Alaskan marine and shorebird population status and ecological requirements will continue." What portion of the $2.5 million would be allocated to Alaska if this request is approved?

Answer: The FY 1990 request includes $304,000 for Alaskan nongame migratory bird research. This work will continue in FY 1990.

Marine Mammal Research

Question: On page 16 of the FWS budget justification, it states that monies for marine mammal research in Alaska can be slashed by $650,000 "since funds will be available to continue priority long-term studies." However, on page 162 it indicates that there is much work to be done including fulfillment of international treaty obligations such as the implementation of the Agreement on the Preservation of Polar Bears which has been signed by five Arctic nations including the United States and the Soviet Union. In addition, the Service must continue implementation of the new marking and tagging regulations governing the taking of marine mammals by Alaska Natives as well as oversee the new incidental take provision of the MMPA. Finally, both polar bear and walrus censuses are scheduled for FY90. How can the Service possibly accomplish all this work when its budget for marine mammal work is being cut by a third?

Answer: Although the FY 1990 budget proposes a $650,000 reduction for marine mammal research, the proposed funding level is adequate to accomplish priority long-term studies. Activities that will continue in FY 1990 with base funding are: monitoring polar bears using the Beaufort Sea; collecting information on polar bears using the Chukchi Sea; developing highest priority zonal management information needs for the sea otter; and testing methods for accurately estimating Pacific walrus populations. In addition, the Service will fulfill all international treaty obligations, implement new marking and tagging regulations governing the taking of marine mammals by Alaska Natives, and oversee the new incidental take provision of the Marine Mammal Protection Act. At the reduced level of funding, research into population estimating techniques for the walrus as well as collaboration with Soviet marine mammal scientists will be deferred and efforts to assess the impacts of sea otters on Alaska shellfish and development of life history and movement models for zonal management will be reduced. Activities that will not continue in FY 1990 are: population studies on trends for the polar bear, walrus, and sea otter; a 5-year research plan for Alaskan marine mammals established in 1986; development of population evaluation techniques for the polar bear shared with the USSR in the Chukchi Sea; research to assess and mitigate the impacts of petroleum development on polar bears; cooperative research, including scientific exchanges with the USSR, to improve the accuracy of field methods for monitoring the status and trends of the walrus populations shared with the USSR; development of techniques to monitor walrus distribution, movements, behavior, and habitat requirements; and cooperative research with Alaska to assess the feasibility of zonal management of sea otters in southeast Alaska.

As long as the overall level of funding for Interior appropriations is consistent with allocations pursuant to the Bipartison Budget Agreement and resulting Budget Resolutions, we would have no objections to this increase from a budgetary standpoint.

Question: On page 190 the Service proposes postponing "collaboration with Soviet marine mammal scientists begun in FY 89." Wouldn't such an action interfere with the completion of an ongoing research effort with the Soviets?

Answer: Cooperative efforts with the USSR on shared walrus and polar bear populations scheduled for FY 1990 will be discontinued. The scheduled walrus research will be terminated and the cooperative research on polar bears will be reduced.

Question: The Southern sea otter has become an endangered species. The Northern sea otter which is biologically identical, can only be distinguished from its southern cousin by its range. Why at a time when sea otters are threatened with extinction off the coast of California would the Service cut funding to study ways of maintaining healthy otter populations in Alaska.

Answer: Research to maintain a healthy otter population in Alaska will continue within available funding levels. A reduced level is possible at this phase of research on the impacts of Northern sea otters on Alaska shellfish and the development of life history and movements models for zonal management. The FY 1989 budget includes $756,000 in research funding for the Southern sea otter, an increase of $300,000 over the FY 1988 funding level of $456,000. The FY 1990 President's budget proposes to continue this funding level to address research related to the Southern sea otter.

Reimbursement of Subsistence Expenses

Question: In referring to the so-called "Alaska subsistence grants" on page 88 of the FWS budget justification it states that "further Federal funding is not essential for continuance of this grant program." Section 805 of ANILCA makes clear that this is NOT a grant program. It is a program designed to reimburse the State of Alaska for expenses it incurs in implementing the subsistence hunting provision of the Federal law. The State is entitled to reimbursement of 50 percent of its subsistence related expenses. How much did the State spend to implement this Federal mandate in FY89?

Answer: ANILCA states that the Secretary shall reimburse the State an amount NOT TO EXCEED either 50% or $5,000,000. In Fiscal Year 1988, the State identified expenditures of $2,995,300. At this time, it is estimated the State will spend $3,295,000 to manage the subsistence program in 1989.

Fish and Wildlife Cooperative Research Units

Question: On page 17 of the FWS budget justification, it indicates that "approximately 6 fish and wildlife cooperative research units will be affected by a reduction of $500,000 and 3 FTEs." Will Alaska be affected by this proposed reduction?

Answer: The Alaska Units will not be directly affected by the proposed reduction. However, the Fish and Wildlife Service continues to pursue combining single Wildlife and Fishery Units, such as the two units in Alaska. These combined Units have three Service employees. The two Alaska Units currently have a total of three employees (the Assistant Unit Leader-Wildlife position at the Alaska Wildlife Research Unit will continue to remain unfilled).

Endangered Species

Question: In FY 1989, $438,000 was appropriated for recovery of peregrine falcons. Was any of that money utilized in Alaska?

Answer: In FY 1989, approximately $154,000 was allocated to Alaska for the recovery of the peregrine falcon.

Question: If so, how was it used"

Answer: In FY 1989, the $154,000 allocated for the recovery of the peregrine falcon was used to fund the ongoing recovery monitoring effort to determine the level of pesticide in 25 peregrine eggs and eggshell thickness of those eggs. In addition to obtaining measurements on the extent of current pesticide levels, measurements of reproductive success and population growth will be acquired from approximately 200 nest sites, and an anticipated 200 young will be banded in order to provide survivorship schedules for assessing population trends.

Question: The President requested a $346,000 funding reduction for peregrine falcons. How will this severe reduction affect the program?

Answer: A total of $438,000 will be used in fiscal year 1989 to support peregrine falcon restoration including contract work with Peregrine Fund (Fund). These funds allowed acceleration of captive falcon propagation of Fund's Boise, Idaho and Santa Cruz, California facilities. The Service believes that the Fund will continue to receive sufficient contributions from private individuals and non-Service entities, in conjunction with the $102,000 in the Service's base.

Aleutian Canada Goose

Question: In FY89, $388,400 was appropriated for translocation, marking, and monitoring of the Aleutian Canada goose. Has this species been downlisted from the endangered list to the threatened list yet?

Answer: No, however a downlisting package is being developed. The recovery plan goal of "...reestablishment of 50 breeding pairs of self-sustaining Aleutian Canada geese on three former breeding islands in addition to Buldir Island..." has not yet been reached. Current estimates show that in addition to the Buldir Island breeding population of 1,000 to 1,500 pairs, Kiliktagik Island in the Semidi island group has 10-20 pairs, Agattu Island has 25 pairs, and 30 pairs on Nizki-Alaid Islands of the Near island group. The poorest data set is for Chugulak Island in the Island of the Four Mountains where the Service believes the nesting population may approach 50 pairs. The population goal for delisting has been exceeded.

Question: When do you anticipate it will be removed from the threatened list?

Answer: Based on the current rate of population growth, it appears that all established recovery goals may be reached in one or two seasons. While data would appear to indicate these goals have nearly been attained and that recovery is imminent, new developments on the wintering grounds in the Central Valley of California somewhat dampen our optimism. Reports from California biologists on the recovery team, express concern for the continued integrity of existing wintering areas. Some areas are slated for changes in land-use practices, specifically converting wintering habitat into agricultural lands and housing subdivisions. As a result the recovery team's prognosis for a time table for Aleutian Canada goose full recovery is uncertain.

Question: The President has proposed a $126,000 reduction in funding to restore the Aleutian Canada goose. Now that Kiska Island has been rendered fox-free, a major transplant effort is in the works. How will this proposed funding reduction affect that program?

Answer: Kiska Island has not been rendered fox free as previously believed. Follow-up work recently conducted has resulted in the discovery of at least one fox which was subsequently trapped. Although we believe that there is now a high probability that all foxes have been eradicated from the island, we do not know for a fact that this is the case without further monitoring. Previous experience leads us to be particularly conservative when making assertions that an island is fox free because one pair of foxes is easily overlooked and its reproductive potential is sufficient to rapidly increase fox numbers in an environment where there are no other competitors for food resources. If the proposed funding reduction occurs, we will have sufficient funds to introduce goslings onto Kiska Island, but follow-up monthly activities will not be conducted.

Woodland Caribou

Question: On page 203 of the FWS budget justification, a proposal to study woodland caribou is discussed. Where will this research be conducted?

Answer: The woodland caribou herd occurs in the Selkirk Mountains of southern British Columbia, northern Idaho and northeastern Washington. The herd was listed as endangered in 1985. Until translocation of twenty-four caribou from Canada to northern Idaho in 1987, the Selkirk caribou population fluctuated from 20-28 animals for about 15 years. Initial research conducted by the National Ecology Research Center, Fort Collins, Colorado, concentrated on early winter habitat in the range of the extant herd in northern Idaho, northeastern Washington, and southern British Columbia with description of early winter habitat, caribou use, influence of snow cover on food availability and caribou movements, and lichen production. This information was critical to development of forest management plans by the U.S. Forest Service and to review of those plans by the U.S. Fish and Wildlife Service and the Idaho Department of Fish and Game. Current research is comparing habitat use of the transplanted caribou with that of the herd before translocations to determine if caribou habitat remains the same, and if information developed prior to translocation remains pertinent. FY 1990 is the last planned year for research on endangered woodland (Selkirk Mountain) caribou.

Alaska's North Slope and the Arctic National Wildlife Refuge

Question: According to the discussion on page 56 of the FWS budget justification, pre-development consultation actions "provide expert ecological consultation and advice to other Federal agencies, states, industry and the public prior to initiation of formal project planning or submission of permit and license applications." It goes on to say that "Service advice is developed through use of baseline information and through review of alternatives, opportunities, problems, and needs for fish and wildlife over large geographic areas and at specific sites." The North Slope of Alaska is one of ten geographic areas identified in this $12 million program. How much money has been allocated to the North Slope and how have the funds been used?

Answer: The following funds have been allocated for Fiscal Year 1989 North Slope activities of the Fairbanks Ecological Services Field Office:

$430,000 - to conduct baseline contaminant studies in the 1002 area of the Arctic National Wildlife Refuge ($299,000 for analytical work, $131,000 for operations).

$55,000 - Ecological Services pre-development resource surveys, site visits in response to Corps of Engineers public notices for proposed development activities, peregrine falcon surveys of Sagavanirktok River and Colville River populations mitigation follow-up surveys.

Question: What advice has the Service rendered and to whom?

Answer: The Service's Fairbanks Ecological Services Field Office has rendered a wide variety of advice related to development impacts on wetland habitats, environmental contaminants issues, and endangered species conservation to numerous Federal (Corps of Engineers, Environmental Protection Agency, Bureau of Land Management), State (Alaska Department of Fish and Game, Environmental Conservation, Natural Resources, and Transportation and Public Facilities), and local (North Slope Borough) government agencies. Advice has also been rendered to industry (BP Exploration, ARCO Alaska, Chevron, Conoco, etc.), local native corporations, and villages. This advice has included information on fish and wildlife resources, anticipated impacts of proposed activities on those fish and wildlife resources, and recommendations to reduce those impacts and mitigate unavoidable impacts. Information has been provided on potential impacts to endangered species (peregrine falcons) and measures needed to minimize those impacts. Information has also been provided on impacts of environmental contaminants on fish and wildlife and their habitat, means to prevent those impacts, and recommendations to alleviate impacts.

Question: What baseline studies have been done and what alternatives have been recommended?

Answer: The Fairbanks Ecological Services Field Office is conducting a baseline study of environmental contaminants in the 1002 area of the Arctic National Wildlife Refuge. Other baseline studies in the Arctic National Wildlife Refuge are being conducted by the Arctic National Wildlife Refuge, Alaska Fish and Wildlife Research Center, and Fisheries. No true baseline studies have been conducted in the Kuparuk/Prudhoe Bay area. Some studies have occurred concurrent with or after development, such as the Endicott monitoring program and various projects monitoring development impacts on waterfowl, particularly brant and Canada geese. Other resource surveys have been site specific, limited in scope and should not be considered as baseline studies.

Alternatives recommended by this office to the above noted entities include relocating and rerouting facilities and roads to avoid higher value habitat areas, timing restrictions to minimize disturbance, consolidation of facilities to minimize impacts, modification of project design to minimize impacts, and rehabilitation of impacted areas to mitigate for unavoidable impacts. Recommendations to deny a project are extremely rare and are made only in compelling cases involving significant impacts to valuable fish and wildlife resources. This office has always been available to discuss and modify recommendations in response to negotiations with the applicant and/or regulatory agency.

ANWR 1002 Instream Flow Studies

Question: The FWS budget justification indicated on page 63 that a "study plan was developed to quantify instream flow requirements of fish and wildlife within the 1002 area of the Arctic NWR." When will this study be completed?

Answer: The water resource inventory and assessment will be completed in 1992.

Question: How much money has been allocated for this program in FY90?

Answer: The proposed Fiscal Year 1990 allocation is $500,000.

Question: The President has proposed a $225,000 increase to study fish ecology in the Arctic National Wildlife Refuge. How will these funds be used?

Answer: The fisheries study is a coordinated effort with the Alaska Department of Fish and Game. The funds will be used to expand and accelerate information gathering on life history, population dynamics, and habitat requirements for fish species that may be affected by oil and gas development in or adjacent to the 1002 area. These data are essential to identify environmental safeguards and potential mitigation in order to facilitate timely development.

Question: Will the other research initiatives that were begun in FY88 with regard to caribou, musk oxen, and waterfowl in the Arctic National Wildlife Refuge continue?

Answer: Yes they will continue.

Question: How will they be funded?

Answer: The $2,000,000 provided through a Congressional increase in Fiscal Year 1988 for various ANWR studies was continued in the request for Fiscal Year 1989. In Fiscal Year 1990, the budget requests total $2,475,000.

Environmental Contaminants

Question: In FY89 $6,353,000 was appropriated to clean-up environmental contaminants on wildlife refuges with particular emphasis on reducing "impact upon wild living resources." How much of this funding was allocated to Alaska?

Answer: The Alaska Region received $445,000 of the $6,353,000 appropriated for environmental contaminants.

Question: How was it spent?

Answer: These funds are being used in conjunction with $598,000 of Refuge Operations funds to define the extent of contaminant problems on Alaska refuges and to engage in clean-up activities where contaminants are identified.

Question: The President has requested $5,863,000 for this program in FY 90. Which refuges in Alaska have been targeted for clean-up if this request is granted?

Answer: These funds will be used to monitor the clean-up effort on the following National Wildlife Refuges in Alaska: Alaska Maritime, Kenai, Yukon Delta and Arctic National Wildlife Refuges.

Question: Page 70 of the FWS budget justification indicates that "58 sites on Service lands are in various phases of the site investigation/feasibility study and/or remedial action process." Which of these sites are located in Alaska?

Answer: Four of these sites are in Alaska. They are Kenai National Wildlife Refuge, Brownlow Point Dewline Site, Demarcation Point Dewline Site, and Amchitka Island.

National Wetlands Inventory

Question: How will the wetlands maps of Alaska discussed on pages 79, and 81 through 84 be utilized?

Answer: Detailed wetlands maps are produced for geographic areas of critical concern for impact assessments of site-specific projects. The maps may be utilized by local, State and Federal agencies as well as by private industry and organizations for comprehensive resource management siting, oil spill contingency plans, natural resource inventories, wildlife surveys and other uses.

National Wetland Inventory maps for oil and gas areas have been used for the laying down of seismic lines and for location of water sources. They have also been used for mapping potential gas fields and for planning roads, drillpads and other infrastructure. The National Wetland Inventory maps are used by State and borough planning departments for long-range development planning, locating suitable construction sites, and road development and realignment. Utility industries utilize these National Wetlands Inventory maps for corridor line development. Wetland maps of the National Wetland Inventory are used by the agricultural community for locating preferred development sites.

Question: How will the final report on the status of estuarine wetlands along Alaska's coast be used?

Answer: The Alaska survey was initiated to complete and compliment the status and trends analysis of both coastal and inland wetlands initiated in the contiguous United States.

The Alaska Coastal Wetlands Survey is designed to determine the current acreage of wetland and deepwater habitat. This will constitute a base-level of information to be used for measuring future wetland trends. The Alaska survey is designed to assess only current wetland acreage.

Statistical information on the extent and distribution of wetlands is important for the development or alteration of Federal, State, and local wetland management programs and policies. Accurate wetland acreage data will reduce conflicts by permitting more efficient planning and resource allocation.

The land ownership/management status of Alaska's wetlands also was determined for this survey. This information is expected to be particularly useful for individual agency management planning.

Land Acquisition

Question: The Alaska Native Village Corporation representing Afognak Island is interested in selling its land on Afognak Island to the Fish and Wildlife Service for incorporation into the Alaska Maritime National Wildlife Refuge. Is the Service interested in acquiring this land?

Answer: Lands within the proposed acquisition have high resource values but are not being considered as an addition to the Kodiak National Wildlife Refuge. Several drainages support runs of pink, coho, and chum salmon which in turn support concentrations of brown bears similar to those found on the nearby Kodiak Refuge. The land also supports Roosevelt elk, Sitka black-tailed deer, beaver, fox, marten, and other wildlife species.

Question: If so, where does it rank in the Service's priority list?

Answer: This project is not included on the National Priority List dated March 1, 1989. The lands in question have not been evaluated for acquisition since they are not within the boundary of an existing refuge.

Question: How much does the Service estimate such an acquisition would cost?

Answer: Until the lands have been formally appraised and evaluated, it is not possible to determine how many acres would be acquired or how the funds could be best expended. An appraisal could be carried out in Fiscal Year 1990 at a cost of $215,000.

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Sport Fish Restoration Program (Wallop/Breaux Fund)
Wildlife Restoration Program (Pittman/Robertson Fund)

Question: The budget proposal to cap the Wallop/Breaux and Pittman/Robertson funds was originally set forth by the Reagan budget, but was also apparently included in the Bush budget. Does the U.S. Fish and Wildlife Service still support this proposal?

Answer: President Bush directed the Office of Management and Budget to take the position that there should be no caps on these programs. The Fish and Wildlife Service is also taking the position that there should be no caps on the programs.

Question: How can you justify not distributing user-financed deposits to the states with the only purpose of making the Federal deficit look better on paper?

Answer: It was believed that all programs should be carefully reviewed to determine where outlays could be reduced. The Pittman-Robertson and Wallop-Breaux programs were experiencing large increases at a time when other programs were being reduced or held to no increases. Therefore, it was proposed to withhold a portion of the funds for these grant programs for obligation in future years to help alleviate the Federal deficit while still retaining sufficient amounts to carry out the programs. As previously stated, this position is no longer supported by the Administration.

Question: Will legislation be required to implement this proposed change in budget authority?

Answer: Both of these grant programs have permanent-indefinite appropriation authority which provides for the automatic appropriation of funds in the year subsequent to deposit. Language was included in the budget proposal to override this authority in Fiscal Year 1990. However, the language is no longer necessary as the proposal is not supported by the Bush Administration.

Question: It was recently reported in the Washington Post that President Bush did not agree with OMB's plan to cap these two programs. Has the White House contacted the Fish and Wildlife Service with the President's concerns?

Answer: On March 7, 1989, President Bush directed the Office of Management and Budget, in its consultations with Congress, to take the position that there should be no caps on the fish and wildlife programs of the Wallop-Breaux and Pittman-Robertson funds. This information was transmitted to the Service.

Wichita Mountains National Wildlife Refuge

Question: The Wichita Mountains NWR is the most frequently visited Wildlife Refuge in the nation, yet it does not have an adequate visitor center to accommodate these guests. Is the F&WS currently planning to request funds for a new visitor center in the near future?

Answer: Conceptual planning for a new visitor center at Wichita Mountains Wildlife Refuge has been completed. At present, there are no plans to request construction funds due to the pressing need to fund higher priority construction projects, primarily health and safety.

Question: How much would a visitor center at Wichita Mountains NWR cost, and what type of center could be constructed?

Answer: Based upon conceptual planning, the estimated cost for the construction of a visitor center at Wichita Mountains Wildlife Refuge is $3.0 million. The Fish and Wildlife Service is considering the construction of this facility as a Job Corps project by the Treasure Lake Job Corps Center located on the refuge. This construction project would offer varied and substantial vocational training opportunities for Job Corpsmen. As a Job Corps work project, the Fish and Wildlife Service would furnish materials and supplies for the building construction and Job Corps would furnish the labor. Certain portions of the projects outside the skill training area of Job Corps would be contracted out. Thus, the cost of the project to the Fish and Wildlife Service would drop to about $2.7 million.

The visitor center would be located adjacent to the Cache intersection near Quanah Parker Lake. This location would provide ready access to all refuge visitors. The visitor center concept would be designed to provide educational and informative messages for the public. Audio-visual presentations, large scale illustrations and associated text would present the history of the Wichita Mountains area. The importance of managing for wildlife would be stressed. As a terminus to the interpretive program at the visitor center, the public use program at the refuge would be introduced. Hiking, camping, and observation areas would be identified.

Question: Last year, this subcommittee appropriated $1.695 million for flood damages at Oklahoma wildlife refuges, with $1.17 million going to Wichita Mountains NWR. Could you please report on the status of these funds?

Answer: The amount appropriated in Fiscal Year 1989 for flood damage repair on Oklahoma refuges was $1.5 million rather than $1.695 million. At Wichita Mountains Wildlife Refuge, initial planning efforts including site investigations and hydrology and drainage studies are underway. Final design drawings and specifications should be completed by the end of December 1989. Actual restoration work should begin in the early summer of 1990. Work will be in the headquarters to Cache road and will include two bridge replacements, road realignment and road repair.

Of the remaining $0.33 million allocated to the Salt Plains, Washita, and Tishomingo National Wildlife Refuges, work is proceeding on road and trail rehabilitation and dike and waterway repair. These projects should be completed by the end of Fiscal Year 1989.

Tishomingo National Fish Hatchery

Question: What advantages can be gained from development of the 160 acres of land currently being purchased adjacent to the Tishomingo NFH?

Answer: Development of the 160 acres of land being purchased at the Tishomingo National Fish Hatchery will provide facilities to produce additional, higher quality striped bass and catfish for current programs. It will enable the hatchery to relieve overcrowding in existing ponds. It will also enable the hatchery to meet the long-range plan of increasing striped bass production for Gulf Coast restoration. Further, pond construction costs on the 160 acres will be more economical than if the ponds were built on the existing hatchery because all of the best pond sites on the present property have been developed. The site also will provide the Service with control of the diversion dam, the aqueduct and the water supply intake structure which is the hatchery's source of water.

Question: Last year, this subcommittee appropriated $195,000 for rehabilitation of facilities at the Tishomingo NFH. Could you please report on the status of these funds?

Answer: The $195,000 appropriated for rehabilitation at Tishomingo has funded eight projects. Six of the projects have been completed or contracted out. These include replacement of water lines to three ponds, repair of kettles to two ponds, repainting of station buildings, repair to two auto-cranes, enhancement of the domestic water system and regraveling of station roads and dikes. The seventh and largest project, which will be advertised for bids soon, involves the lining of two ponds with plastic to eliminate seepage. The eighth project is paving of station driveways and parking areas and will be underway in July.

Little River National Wildlife Refuge

Question: What percentage of the total land acquisition at Little River National Wildlife Refuge has been completed?

Answer: As of March 1, 1989, the Fish and Wildlife Service has acquired 8,622 acres for the Little River National Wildlife Refuge, representing about 60 percent of the 15,000-acre total goal. Two additional willing seller tracts totaling 3,252 acres were presented for price approval at the next Migratory Bird Conservation Commission meeting scheduled for May 9, 1989, for acquisition in Fiscal Year 1990. Purchase price as presented and the amended boundary were approved by the Commission.

Question: River bottoms comprise some of the most productive farm land in Oklahoma. When the farmers home administration acquires farm land through foreclosures, is the Fish and Wildlife Service required to place a conservation easement on that land?

Answer: The Fish and Wildlife Service is required to provide a recommendation for conservation easements for the protection of wetlands and floodplain management under the terms of a Memorandum of Understanding with the Farmers Home Administration, signed in May 1987. The Farmers Home Administration is establishing most conservation easements on inventory properties, that have been voluntarily conveyed to Federal ownership, under the authority of Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands. These executive orders require that, when Federal property is to be leased or sold, restrictions must be placed in the lease or deed that will protect and enhance wetlands and floodplains on the property. Because Farmers Home inventory property is Federal property, it is subject to these requirements. The Fish and

Wildlife Service assists the Farmers Home Administration in identifying important environmental resources on inventory land, recommending appropriate conservation easements, and managing easements that are established. The mutual objective of this program is to protect wetlands, floodplains, and resources of Federal trust responsibility while returning productive farmland back to those interested in farming it.

Question: May farming still take place on such land if an approved conservation plan is utilized to minimize erosion?

Answer: If such land is productive farmland in Oklahoma, it is unlikely that a conservation easement would be established for the protection of wetlands or floodplain management. Accordingly, continued farming will still take place on such land if an approved Conservation Plan is utilized. If such land is marginal for agricultural production and a conservation easement is established for purposes of protecting and enhancing the existing wetland and floodplain values, then farming may still take place, but only with the concurrence of the easement manager.

Question: Have any wetlands in the Little River area been transferred to the Fish and Wildlife Service from the Farmers Home Administration inventory?

Answer: No wetlands held in inventory by the Farmers Home Administration have been transferred to the Fish and Wildlife Service in the Little River area. Discussions underway with the Farmers Home Administration should result in a division of inventory lands in the Red River drainage into more saleable farmland blocks which can be conveyed by the FMHA. Those marginal farmlands which contain a high percentage of wetlands are proposed for transfer to the Service as a part of the National Wildlife Refuge System.

Question: Were the former owners of this land notified prior to its transfer to the Fish and Wildlife Service?

Answer: Some recovery rights by prior owners may exist under provisions of the Farm Bill on inventory property of interest to the Service in the Red River drainage. According to the Farmers Home Administration, prior owner recovery rights have been exhausted for most of these properties.

Elmer Thomas Dam

Question: Since it was identified as hazardous over a year ago, $1.7 million has been spent on Elmer Thomas Dam near Lawton, Oklahoma, and $3 million has been included in the budget for FY 1990. Full restoration of the dam and lake will cost over $14 million. How much of the $4.7 million already committed to Elmer Thomas Dam can be counted on toward the total cost of $14 million?

Answer: In FY 1989 funding in the amount of $1.7 million was made available for temporary emergency measures. The $3.0 million requested in FY 1990 would apply to the replacement structure for Elmer Thomas Dam. This is about the maximum funding that could be used in FY 1990 given the current schedule. Approximately one year will be required for final design, preparation of specifications, and solicitation of bids. The cost of full restoration adjusted for inflation would be about $16.4 million, in 1991 dollars, including the $3.0 million in the budget request.

Question: Who originally constructed the dam at Elmer Thomas Lake, and when was it purchased by the Service for the Wichita Mountains NWR?

Answer: Construction of Elmer Thomas Dam began in 1933 and ended in 1939. During the course of construction, the control of the project changed hands among several Federal and state agencies; the Reconstruction Finance Corporation prior to December 1933; the Civil Works Administration and the Federal and Oklahoma Emergency Relief Organizations at different times between December 1933 and December 1935; and finally the Works Progress Administration after December 1935. When construction began, the area was part of the Wichita National Forest administered by the U.S.

Forest Service. In 1935, the Forest was transferred to the Bureau of Biological Survey (predecessor of the U.S. Fish and Wildlife Service) and named the Wichita Mountains Wildlife Refuge. Responsibility for the dam (then under construction) was part of the transfer.

Question: Isn't it true that the feasibility study conducted by G.E.I. Consultants determined that the full restoration option was favored by Fort Sill and the surrounding community?

Answer: After a briefing held at the time when the feasibility study was 50 percent complete, written responses were received by the Service from the City of Lawton, Fort Sill, the Lawton Chamber of Commerce and Industry, the Oklahoma Department of the Wildlife Conservation, and a local recreationist. All of those parties expressed support for the replacement of the existing dam with a new dam. The City of Lawton, the Lawton Chamber of Commerce and Industry, and Fort Sill also stated support for repairing the north spillway to conserve the municipal water supply provided by overflow water from Elmer Thomas Lake. More recent correspondence received from Fort Sill by the Service reiterates their support for full restoration of the dam, however, Fort Sill has not indicated a willingness to fund the incremental cost of full replacement for the dam as compared to a dam that would control a 100 year flood.

Question: If the Fish and Wildlife Service constructed a smaller dam which could only protect against a 100-year flood, what would be the impact on recreation benefits to Fort Sill, Lawton, and the surrounding area?

Answer: Since the smaller flood control dam would not impound a permanent water body, water for recreation would not be available. According to a Fort Sill spokesman, Lake Elmer Thomas is Fort Sill's primary outdoor recreational facility. The lake had over 83,000 recreational visits by Fort Sill personnel from Memorial Day through November 22, 1987. Numerous recreational facilities have been constructed on Fort Sill adjacent to Lake Elmer Thomas. They include a boat launching ramp, a marina with boat docking, picnic areas with tables and shelters, a campground, a playground area, and a swimming beach. In addition, major upgrades have been proposed in Fort Sill's Installation Master Plan for the recreation area.

Although complete public-use data have not been maintained by the refuge for Lake Elmer Thomas, the lake has historically been a favored recreation spot for the general public. In recent years, some recreational use has shifted to nearby Lake Lawtonka. For example, beach usage of Lake Elmer Thomas on the refuge has steadily declined from 18,000 swimmers in 1978 to 4,937 in 1987. The most recent decline in 1987 was primarily due to the opening of a free public swimming beach on Lake Lawtonka by the City of Lawton.

Question: How much did the Fish and Wildlife Service pay to have the water pumped out of the lake?

Answer: The Fish and Wildlife Service has paid $1.1 million to date to excavate a drainage channel through the spillway and to have the remaining water pumped from Lake Elmer Thomas. The capability to pump water from Lake Elmer Thomas will continue to be available until the dam is replaced.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

New Mexico Cooperative Fish and Wildlife Research Unit

Question: Mr. Robinson, the FY 1990 budget proposes a $500,000 reduction in funding for the Fish and Wildlife Service Cooperative Research Units. I thank the Chairman and Ranking Member of this Subcommittee for their strong support for this program. Due to their efforts, New Mexico

State University was able to successfully compete to establish a new unit with funding that was made available in the FY 1988 Continuing Resolution. In addition, additional appropriations made available for FY 1989 will allow staffing vacancies at the NMSU unit and other units to be filled. What is the Administration's rationale for the proposed reduction in funding for the fishery and wildlife cooperative units from $6.3 million in FY 1989 to $5.8 million in FY 1990?

Answer: In response to a Congressional increase in FY 1989, $300,000 was allocated for staffing Unit vacancies and $200,000 was allocated to establish one new combined Unit. It is anticipated that at the beginning of FY 1990, vacancies will remain at some Units within the system. The Service proposes not filling these staff vacancies, thereby saving salaries and moving expenses. This is a lesser-priority activity in the current restrained fiscal situation.

Question: I note that in the budget justification documents, the Service indicates that the proposed $500,000 reduction will result in a reduction of 3 FTEs, and that approximately 6 units will be affected by this reduction. What do you mean when you say that approximately 6 units will be affected by the proposed reductions in funding and staff?

Answer: At the proposed FY 1990 level of funding, the Service will not fill any Cooperative Research Unit vacancies, unless they can be filled from within the Unit program. At the time the FY 1990 Budget Justifications were prepared, this included vacancies at Units in Vermont, New Mexico, Texas, Washington, South Carolina, New York, and Mississippi.

Question: Will Units be closed?

Answer: No, the budget reduction will not cause any Units to be closed. The budget reduction will cause existing vacancies to remain unfilled during FY 1990.

Question: Will staffing be cut?

Answer: We are optimistic that staffing cuts will not be necessary in FY 1990. To forestall this, we are proposing that Unit positions be filled by personnel already in the Unit program; this measure will take effect immediately and will keep the Unit program in the black during FY 1989. The only exception will be that we will proceed as usual to fill the Vermont Unit Leader position during FY 1989 when the Cooperative Agreement is completed.

Question: If, contrary to your expectations, there are no vacancies at existing units, how would you make those staffing reductions?

Answer: We will have several Unit vacancies at the beginning of FY 1990 because we are currently planning to fill Unit vacancies solely from within the Unit program.

Question: Could you give us a status report on the hiring of Unit Leaders and Assistant Unit Leaders at the new units in New Mexico, Arkansas, South Carolina, Texas, North Carolina, and Washington with the increased FY 1989 funding Congress appropriated?

Answer: The Unit Leader and Assistant Leaders for Fisheries and Wildlife are on board at Arkansas. The Unit Leader and Assistant Leader for Fisheries are on board at North Carolina; recruitment for the Assistant Leader-Wildlife is in progress. The Unit Leader is on board in South Carolina and recruitment for the two Assistant Leaders is in progress. The Unit Leader is on board in Texas and recruitment for the two Assistant Leaders is imminent. The New Mexico Unit Leader will report in April 1989. The position of Assistant Leader at the New Mexico Unit is now being advertised. Candidates for the Washington Unit Leader are currently being interviewed and a selection is imminent. Once a Leader is hired at the Washington Unit, a position for the Assistant Leader Wildlife will be advertised. We will assess situations where recruitments are in progress, but will pursue placing personnel currently in the Unit program in the vacancies.

Indian Fish Hatcheries

Question: Mr. Robinson, this Senator and others have actively sought to have the Fish and Wildlife Service oversee the operations of Indian fish hatcheries and fishery assistance offices in their states. I have sought that treatment for the Mescalero fish hatchery in New Mexico for the past two years. In fact, with the support of the distinguished Subcommittee Chairman and Ranking Member, this Subcommittee directed last year in its report on the FY 1989 Interior Appropriations bill that the Service should fund, and I quote "both the BIA hatcheries and fishery assistance offices...until changed by the Committee" (end quote). Once again, as you highlight on page 5 of your statement, the FY 1990 budget request has proposed to continue these operations under the BIA. Mr. Robinson, could you give the Subcommittee your assessment of our experience during the 1983 through 1987 period when the Indian fish hatcheries and fishery assistance offices were funded through the BIA appropriation?

Answer: The Fish and Wildlife Service (Service) has many years of experience operating hatcheries with the Bureau of Indian Affairs (Bureau) funding under a Memorandum of Agreement. Prior to the transfer of funding for hatcheries to the Service in FY 1989, Quinault National Fish Hatchery was funded by the Bureau under a similar Memorandum of Agreement. From 1983 through 1987 the Service was working directly with the tribes, and the Service was operating the hatcheries. This prior experience has led the three tribes involved, the Quinalt Indian Nation, the Mescalero Apache Tribe, and the White Mountain Apache Tribe to express a preference for the hatcheries to remain in the Service's budget. Unfortunately, the finalization of the Agreement was accomplished at least four to six months after the beginning of each fiscal year, making operations difficult.

Question: To reinforce what I already believe to be the case, could you tell the Subcommittee why funding for these facilities should remain in the Fish and Wildlife Service appropriation?

Answer: The Department believes that funding for these facilities should be provided through the budget of the Bureau of Indian Affairs because the primary benefits of the programs involved accrue directly to the tribes. The Service is charged with providing technical assistance. An "Agreement on Policy: Trusteeship of Tribal Fishery Resource", signed by the Assistant Secretaries for Indian Affairs and Fish and Wildlife and Parks in 1984, recognizes the Service as the Department's principal scientific authority on fishery matters and states that the Service shares with the Bureau the obligation to assist in fulfilling the Secretary's Indian Trust Responsibilities.

In FY 1989, the Indian Education and Self Determination Act of 1975, P.L. 93-638, was expanded to include all Bureaus in the Department of the Interior. This would allow for the Tribes, as they develop the technical capability, to assume responsibility for programs directly from the Service, as well as the Bureau of Indian Affairs.

Question: In your professional opinion, are the tribal hatcheries adequately funded at this time?

Answer: Some of the facilities have essentially received level funding since 1984. Since operating costs have continued to rise during this time, some difficulty has been encountered in maintaining program activities. For example, the current funding level for the Quinault hatchery is $254,000 and 6 FTE's, only enough for minimum fish production at the 1986 level. To meet fishery management plan requirements and treaty obligations, the Quinault hatchery would require additional funding of $65,000 for operations and 1.5 FTE's for full production with existing facilities.

Funding for Mescalero National Fish Hatchery

Question: Specifically, is the funding requested for the Mescalero hatchery sufficient to support its ongoing operations?

Answer: Mescalero was adequately funded in FY 1988; however, recent, unforeseen increases in the cost of fish food, as well as other operating costs, have affected the hatchery's ability to meet production goals. To offset these increased costs and maintain current production levels, Mescalero would require an additional $24,000.

Indian Fish Hatcheries

Question: Is funding for maintenance of these facilities keeping pace with identified requirements?

Answer: Although the Bureau of Indian Affairs has been able to provide some maintenance funding over the last several years, it has generally not been enough to meet all the maintenance needs. In addition to the Bureau funding, the Service has funded some high priority maintenance from its maintenance account for the National Fish Hatchery System. The report entitled "A Review of Maintenance Needs at National Fish Hatcheries" provided to Congress in May 1988, identified total maintenance needs at these hatcheries as follows:

Alchesay NFH, AZ	$ 196,000
Williams Creek NFH, AZ	419,000
Mescalero NFH, NM	437,000
Quinault NFH, WA	194,000
	$1,246,000

Question: I note that on page 5 of your statement, you indicate that a decrease in maintenance funding of $1.6 million is proposed for FY 1990. How much maintenance funding do these hatcheries now receive?

Answer: It is proposed that the $1.6 million be funded through BIA in FY 1990. In FY 1989, maintenance funding was allocated to these hatcheries as follows:

Alchesay NFH, AZ	$ 35,000
Williams Creek NFH, AZ	7,000
Mescalero NFH, NM	65,000
Quinault NFH, WA	97,000
	$204,000

Question: This Senator supports self-determination for the Indian people. But it seems to me that the proper way to achieve that goal is for the Fish and Wildlife Service, with its expertise, to directly operate these hatcheries, and more importantly to provide training for Indian tribes in the management of their fisheries resources. Do you have any thoughts on the best way to provide training to promote this goal?

Answer: The Service recognizes its stewardship responsibilities to assist in fulfilling the Secretary of the Interior's Indian trust responsibilities. Service policy continues to provide for assistance directed toward developing and encouraging full Tribal capabilities in fish and wildlife management and firmly supports the concept of Indian self-determination. To promote this goal, the Service is developing a training program in conjunction with the Fisheries Academy at Leetown, West Virginia, to provide training opportunities for participating tribes. This training, however, is contingent upon development of the Fisheries Training Academy in Leetown, West Virginia.

Additionally, the Cooperative Fish and Wildlife Research Unit at the University of Arizona has a formal training program with two native Americans enrolled as undergraduates. During the summer, the fishery assistance offices or national fish hatcheries in the Arizona-New Mexico area could employ these students and provide them with on-the-job training, as funding permits. This type of integrated program would enable the tribes to manage their own fishery resources. These initiatives are aligned with the current Service Policy: "Guidelines for Implementing Service Policy for Fish and Wildlife Assistance to Indians."

QUESTIONS SUBMITTED BY SENATOR MARK O. HATFIELD

National Forensics Laboratory in Ashland, Oregon

Question: For FY 1989 the Congress appropriated a total of $1,015,000 for the operational costs of the National Forensics Laboratory in Ashland, Oregon. It is my understanding that your FY 1990 budget requests is about half of the FY 1989 funding level. If Congress approves this request, how will the operations of the Laboratory be affected?

Answer: The proposed FY 1990 funding of $515,000 would provide approximately 4 FTEs. At this level, the National Eagle Repository and laboratory maintenance would be continued. The National Forfeited and Abandoned Property Repository would operate on a limited basis.

Question: Will operations be cut back? If so, how?

Answer: Forensic support and species-specific identification in support of Service-initiated investigations would be limited to literature searches and technical assistance. Forensic assistance to State and international conservation agencies would be eliminated.

Question: It is my understanding that four additional employees were scheduled to be hired in FY 1990, increasing the number of persons employed to 16. If your request is approved, will these four positions be filled?

Answer: FY 1989 operational and maintenance funding is $1,015,000. This funding level supports 12 FTE of which all but four have been filled. Recruitment has begun on the final four positions, with the intent to fill all four positions by the end of FY 1989.

Question: If the FY 1990 request is approved, will it be necessary to reduce the current number of staff (there are 12 employees currently)?

Answer: The FY 1990 funding request of $515,000 will require a reduction of eight staff positions, leaving only 4 FTEs.

QUESTIONS SUBMITTED BY SENATOR DAVE DURENBERGER

Minnesota Valley National Wildlife Refuge

Question: "May I have an itemized accounting of how the U.S. Fish and Wildlife Service plans to spend the $548,000 that the FY 1990 budget requests for Minnesota Valley National Wildlife Refuge?

Answer: The FY 1990 budget contains no funds for the new Minnesota Valley NWR visitor center, which is under construction and scheduled for occupancy in December, 1989. Salaries and benefits for the current refuge staff of 13 account for about $450,000; utilities are estimated at $15,000; annual cost for the General Services Administration vehicle fleet is $30,000; other services, shop supplies, and equipment is $53,000. The total is $548,000. This represents essentially fixed costs to operate the refuge, including the existing headquarters building, and provides funds for minor routine maintenance.

Question: In addition, why did the Service not request additional funding to operate and maintain the soon-to-be opened Visitor Center at this refuge?

Answer: The Service did not request additional funding for the Visitor Center because within the constraints limiting the amount the Service could request, other needs were deemed more critical and of higher priority.

Eastern Timber Wolf

Question: Why does the U.S. Fish and Wildlife Service's FY 90 budget request provide no funding for the Eastern Timber Wolf recovery plan?

Answer: Funds are provided in FY 1990 for the Eastern Timber Wolf (gray wolf) Recovery in the amount of $21,000. The gray wolf is classified as threatened in Minnesota and endangered elsewhere in the lower 48 United States. The population is currently stable at approximately 1,200. Eastern Timber Wolf Research has been conducted in seven regions of Minnesota for over 15 years. During that time, significant ecological and behavioral information has been gained and answers to primary management questions have been obtained. The Minnesota population of the gray wolf is on the road to recovery. As a result, no funds for Eastern Timber Wolf Research are proposed in FY 1990. The Minnesota Research Station will be closed during the first quarter of FY 1990 due to completion of research on gray wolves. The three affected staff members will be reassigned to high priority research activities at other locations. The resources will be redirected to enhance research efforts to promote the recovery of endangered Hawaiian forest birds and Puerto Rican parrots.

MINERALS MANAGEMENT SERVICE

STATEMENT OF ROBERT E. KALLMAN, DIRECTOR

ACCOMPANIED BY:

- THOMAS M. GERNHOFER, ACTING DEPUTY DIRECTOR
- WILLIAM D. BETTENBERG, ASSOCIATE DIRECTOR FOR OFFSHORE MINERALS MANAGEMENT
- JERRY D. HILL, ASSOCIATE DIRECTOR FOR ROYALTY MANAGEMENT
- GARY S. FOY, ACTING CHIEF, BUDGET DIVISION
- ANTHONY L. ITTEILAG, DIRECTOR OF BUDGET, DEPARTMENT OF THE INTERIOR
- JEAN W. BAINES, ACTING ASSISTANT DIRECTOR FOR ADMINISTRATION
- ABRAHAM E. HASPEL, ASSISTANT DIRECTOR FOR PROGRAMS REVIEW

BUDGET REQUEST

Chairman BYRD. The subcommittee will now turn to the Minerals Management Service.

[Pause.]

Chairman BYRD. The fiscal year 1990 budget request for the Minerals Management Service is $181,461,000 for leasing and royalty management, and $352,829,000 for payments to States from receipts under the Minerals Leasing Act.

The request for leasing and royalty management is $9,717,000 above the current appropriations, with approximately one-half of the increase associated with a major contract effort to shorten the audit cycle for the 12 largest oil and gas royalty payers.

The proposed payment to States is $95,860,000, less than the fiscal year 1989 appropriations.

The majority of this decrease—$70,550,000—is related to the administration's proposal to deduct a portion of Federal firefighting costs from total mineral receipts before these receipts are shared with the States.

In addition, the fiscal year 1990 budget proposes a decrease of 48 full-time equivalent personnel from the current level of 2,044.

PREPARED STATEMENT

Mr. Kallman, you have a prepared statement that will be included in the hearing record. Would you please summarize it briefly, if you wish, and introduce your associates who are with us today, and then we will move to the questions.

Mr. KALLMAN. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF ROBERT E. KALLEM

Mr. Chairman and distinguished members of the Subcommittee, I am pleased to appear before you today to present testimony in support of the FY 1990 budget proposal for the Minerals Management Service (MMS). This is my first opportunity to testify before the Subcommittee, following my appointment as Director of the MMS on October 24, 1988, and I look forward to working with all of you.

The MMS FY 1990 budget request totals $533.29 million. This represents an increase of $9.72 million from FY 1989 in the Leasing and Royalty Management (LARM) appropriation and a decrease of $95.86 million in the appropriation for Payments to States from Receipts under Mineral Leasing Act. Of the net increase in the LARM appropriation, $5.19 million is for the Royalty Management Program (RMP), $0.73 million is for the Offshore Minerals Management (OMM) Program, and $3.80 million is for General Administration. In response to President Bush's FY 1990 budget proposal, there may be some modifications to our efforts described in the Budget Justifications.

President Bush has said that "not only leadership is passed from generation to generation, but so is stewardship". Secretary Lujan and President Bush have jointly agreed to a ten-point agenda for the Department of the Interior based on this principal goal of stewardship. I fully support this ten-point agenda and will incorporate three particular points of the stewardship agenda into the MMS programs: domestic resources, harmony, and partnership.

The first of these, domestic resources, demonstrates a commitment to protect and enhance the Nation's natural resources, while proceeding with their environmentally sound development. The second and third points, harmony and partnership encourage the discussion of natural resource issues through a process of consultation, cooperation, and coordination. Secretary Lujan has stated that "we all need to lower our voices so that we can hear each other". I support these goals and am committed to improving consensus with all constituent groups. As a consequence, we have developed two guiding principles or themes for MMS. They are:

> Promote harmony in purpose through improved dialogue and collaborative efforts with all affected parties; and
>
> Continue to develop a fair and more flexible management of MMS programs.

I would like to discuss some specifics of the MMS programs and our FY 1990 budget proposal in light of these two major themes.

PROMOTE HARMONY IN PURPOSE THROUGH IMPROVED DIALOGUE AND COLLABORATIVE EFFORTS WITH ALL AFFECTED PARTIES

Many of the recent achievements of this agency have been attributable to joint efforts with affected parties. Both major programs of the MMS have moved aggressively toward this goal.

A good example of MMS's efforts in this regard is a recent request for ideas on a series of options for possible change to the current RMP mission or manner in which that program operates. This request was made to over 120 royalty management constituents representing the States, Indian Tribes and allottees, industry, Congressional Committees, and other oversight groups, including the General Accounting Office and the Office of the Inspector General. These same constituents were also asked to comment on a status report regarding the RMP's efforts to implement its overall objectives. This input will be used in developing the scope of a feasibility study leading to decisions regarding appropriate operational and automated systems support to meet program requirements well into the 1990s.

The Federal/State task force approach that MMS is using in the hard minerals program in OMM is another good example of how we can work in a more cooperative partnership with coastal States to identify and resolve issues in an orderly and timely manner. Task force membership is comprised of an equal number of key Federal and State personnel with advisors from industry, academia, other concerned Federal and State agencies, and interested parties, including the public, so those concerned can be well informed and provide early input to ongoing and proposed marine mining activities.

Recent initiatives that embody the spirit of this theme in the offshore oil and gas leasing program include the formation of State/Federal task forces to establish dialogue with the Governors of coastal States and other interested parties regarding oil and gas lease sales off their coastlines. Consultations with the State of Florida have resulted in two task forces to further analyze oil spill risks and the potential impacts of drilling operations on coastal and marine resources. A Pacific Northwest Outer Continental Shelf (OCS) Task Force has been established to consult on issues regarding a proposed sale off the Washington and Oregon coastlines in 1992.

In his FY 1990 budget proposal, President Bush expressed his commitment to collaborative efforts to allow oil and gas development to continue in an environmentally sound manner. He stated that "there are legitimate differences of opinion concerning the environmental effects of OCS leasing in certain areas" and directed that a task force be established to review and resolve environmental concerns in these areas. I fully support the President's policy and I think this task force effort will be an important contribution to consensus building on OCS issues.

We have requested increases totalling $700,000 for special environmental studies and additional collaborative efforts with coastal States. These efforts should contribute to reducing conflicts with affected parties so that activities such as offshore oil and gas lease sales in controversial areas, development of the next 5-Year Oil and Gas Leasing Program, and strategic and other mineral development may proceed.

MMS has worked diligently in my home State of California to ensure safe and environmentally sound development. The Pacific region is second only to the Gulf of Mexico in offshore oil and gas production. The largest concentration of OCS operations in the region is in the Santa Barbara Channel and the Santa Maria Basin. Because these areas are the focal point for industry office operations and for the local governments we most regularly work with, we are proposing the relocation of the Pacific Regional Office from Los Angeles to Ventura to enhance communication and coordination between our office and local governments, the public, and industry representatives. The improved communication and access to the developing fields and local citizens will enable MMS to improve the effectiveness of program planning, management, inspection and local government coordination.

The move will, hopefully, also have a salutary effect on long term turnover, as well. The very high turnover rate and poor working conditions in the Los Angeles office create serious problems in accomplishing the work of the region. One of the key FY 1990 initiatives, and another example of our collaborative approach, is a requested budget increase of $2,039,000 to relocate the Pacific Outer Continental Shelf (OCS) Regional Office.

There are several ongoing initiatives to actively seek advice and participation from those affected by the Royalty Management Program that I would also like to bring to your attention.

- We hosted regional seminars on February 15, March 2nd, and March 9th to update the oil and gas industry on the status of automated systems improvements and other royalty program initiatives. These seminars provide another useful opportunity to listen to some of our constituents and respond to their concerns about the program.

- The Secretary's Royalty Management Advisory Committee meets regularly to provide advice and recommendations to the Secretary concerning program operations and policies. This committee consists of members from States, Indian groups, industry, and the general public.

- The Bureau of Indian Affairs (BIA)/Bureau of Land Management (BLM)/MMS Steering Committee meets to resolve mineral leasing and royalty management issues. This committee, composed of four senior managers from each agency, recently concluded a memorandum of understanding to improve communication and facilitate information exchange among the agencies.

- As a result of the language and funding included in our FY 1989 appropriation, we are currently working with the State of Louisiana to enter into a cooperative agreement to conduct audit activities on leases subject to section 8(g) of the Outer Continental Shelf Lands Act. In addition, California and Texas have expressed interest in entering into an agreement to audit 8(g) leases. We will also continue to fund the delegated and cooperative audit programs that have already been quite successful with States and Indian Tribes. Audits conducted under these programs have resulted in additional royalty and interest collections of $65 million through FY 1988.

- New valuation guidance for oil and gas became effective on March 1, 1988 after extensive State, Indian, industry and congressional input. We made minor technical corrections to this guidance during 1988 and have continued to monitor the effects of these new guidelines on all parties involved. While some modifications may still be necessary to alleviate problems not previously envisioned, the new regulations clarify and simplify oil and gas valuation for royalty purposes and have generally been well received.

Our future successes will be a function of collaborative efforts with all affected parties. I personally intend to further emphasize this vital aspect throughout every level of the organization.

Next, I would like to share my thoughts on our second theme.

CONTINUE TO DEVELOP A FAIR AND MORE FLEXIBLE MANAGEMENT OF MMS PROGRAMS.

MMS remains cognizant of the fact that outside factors greatly affect its ability to accomplish its missions. In this connection, MMS has to be particularly attentive and sensitive to change. For example, oil and gas leasing operations, as well as royalty valuation, are affected by the fluctuations in market prices of energy commodities. Leasing can be affected by new environmental information, and regulatory operations by advancements in technology. Furthermore, the needs of affected parties vary. For MMS to be successful, we must constantly seek to balance the competing and changing calls on our resources and adapt our program management accordingly.

This is another goal toward which both MMS programs have begun activities and for which we are requesting additional funding.

Recently, MMS assumed the responsibility of accounting for Indian "nonstandard" leases and agreements, in addition to auditing responsibilities already performed for Indian leases. These leases and agreements are joint venture, net profit share, royalty-in-kind, and other extraordinary arrangements. A total of $200,000 was added to our FY 1989 appropriations to enable MMS to begin this effort. We were able to install selected royalty-in-kind leases on the Auditing and Financial System (AFS) and expect to complete installation of the remaining royalty-in-kind leases by January 1990. In addition, Price Waterhouse, under contract to MMS, developed accounting procedures for the remaining nonstandard arrangements, and a phased conversion to an automated support system is scheduled for completion by October 1989. We have requested an additional $120,000 for FY 1990 to fund fully this specialized royalty accounting for Indian leases with nonstandard provisions.

Another example of adaptive management in the RMP is in production accounting. Beyond our initial pilot reporting arrangements, the Department decided that MMS, rather than BLM, should be responsible for both onshore production accounting and operational reporting. The first phase of onshore production reporting to the Production Accounting and Auditing System (PAAS) was successfully completed in October 1988. A total of 9,515 leases, representing about 65 percent of the total onshore production volume, have been successfully converted to PAAS. The reporting error rate for this group of leases is below 7 percent. We have requested increases totalling $850,000 in FY 1990 to complete the centralization and automation of all minerals production reporting on PAAS.

To assure the accuracy of revenues collected, MMS continues to provide an aggressive and comprehensive audit compliance program for Federal and Indian leases. The goal of accurate revenue collection is to confirm that the States, Indians, and Federal government receive all that they are entitled to while at the same time assuring that lessees do not overpay. To further this effort, beginning in FY 1990, the Department is proposing an initiative to make audits as contemporaneous as possible. This proposal would allow audits, to the extent practicable, to be completed within a timeframe that generally does not exceed the 6-year records retention requirements of the Federal Oil and Gas Royalty Management Act of 1982. To implement this proposal, MMS has developed an accelerated schedule for completing residency audits at the 12 largest payors. MMS auditors would be supplemented by contract resources until the more contemporaneous audit cycle can be maintained by MMS staff. The budget proposal includes an increase of $5,000,000 to begin this multiple-year contracting effort.

With the passage of recent legislation (Public Law 100-524) recommended by MMS in a spirit of equity, States are now allowed to share in all late payment interest revenues. Previously, per the Federal Oil and Gas Royalty Management Act of 1982, only interest revenues from oil and gas leases on public lands were sharable. Currently, late payment interest is due from royalty payors for royalty underpayments. As a similar matter of fairness, MMS is requesting $150,000 to pay interest on refunds to royalty payors who successfully appeal bills for additional royalties.

Although we are able to propose a decrease of $1,300,000 in computer hardware costs, we are requesting increases totalling $687,000 to continue certain operational contract functions, such as exception processing, reference data base maintenance, and systems improvements so that we can maintain these contracts at their current level of effort. Because most MMS contracts include adjustments for normal salary increases and other rising costs, the amount of work which can be accomplished within the same level of available funds declines each year. In order to remain responsive to the needs of the program and its constituents, we can't afford to have these services diminished.

As I stated before, the OCS program is also actively striving to meet the goal of fair and more flexible management. Furthermore, most of the adaptive processes that have recently been implemented include extensive public input, consistent with our first goal.

One recent example of these efforts for managing OCS resources is the experimental Sensitive Tract Evaluation Process (STEP) announced in the Call for Information and Nominations for Sale 119, Central California. The essence of this process is the solicitation of specific information on environmental sensitivity and suggestions for criteria for evaluating the relative environmental sensitivity of tracts. This new approach is intended to help us in a number of ways. First, by getting more specific information from interested parties, we will be in a better position to understand the basis of their positions on tracts that should or should not be offered. Consideration of this information will help us develop a greater range of options aimed at responding more flexibly to the problems which are identified by those commenting. Second, our solicitation of comments on criteria is designed to help us refine analyses of environmental sensitivity. Third, our effort to understand their criteria and refine our own will help make clear to the public our concern for balanced decisionmaking.

In his FY 1990 budget, President Bush proposed to proceed with prudent, environmentally sound OCS leasing and development. Consistent with this objective, a task force consisting of the Departments of Interior, Commerce and Energy, the Environmental Protection Agency, and the National Academy of Sciences is being established to review and resolve environmental concerns over adverse impacts of sales for the sale areas of Southern Florida, Southern California, and Northern California. A report is expected by January 1, 1990.

In contrast to the budget proposal as submitted by President Reagan, the revisions proposed by President Bush direct that FY 1990 leasing activities for sales #91, #116 (south of 26 degrees) will be postponed indefinitely and #95 will be delayed until the task force resolves concerns over environmental effects in these areas. I believe the President's initiative will provide valuable input for conducting a fair oil and gas leasing program.

We are about to start the development of the next 5-year OCS oil and gas leasing program. Results of President Bush's task force will be considered in the new program. Given the lengthy development process and the desirability of planning for 1 year of overlap with the current program, we hope to issue the request for comments on the development of the new program in June of this year. The process for developing the new program for mid-1991 through mid-1996 will provide many more opportunities for the receipt of suggestions from the public and for the development of new leasing options.

In order to respond to changes in oil and gas lease activities, we are requesting increased funding for helicopter support for our inspection program. OCS leases are extending into areas further from shore or in more remote areas in the Gulf of Mexico. Also, the number of active leases has recently increased. Additionally, there are new requirements for the inspection of well workovers and a change in the inspection program to do more sampling checks on a larger number of facilities. We have requested an increase of $863,000 to fund the additional helicopter requirements necessitated by these changes and contract rate increases for the current level of helicopter support.

Consequently, in conjunction with our first principle, I strongly believe that fair and flexible management of MMS programs will reflect well on the MMS and allow us to better accomplish our missions in the future.

Next, I would like to briefly mention our deficit reduction efforts.

In the interest of meeting Federal deficit reduction objectives, MMS is proposing to fund a net increase of $1.74 million in fixed costs through: (1) decreases totalling $1.30 million in travel, training, equipment purchases and contract services in the OCS program; (2) a decrease of $0.41 million in royalty management systems improvements; and (3) $0.03 million of savings expected to be achieved by consolidating all MMS Virginia offices in one location. To further help meet Federal deficit reduction objectives, we are absorbing the effect of the January 1989 pay raise in FY 1990 by reducing FTE usage. Since this FTE reduction of 48 is expected to be achieved through employee attrition, the specific programmatic impacts are not yet known.

Finally, I would like to discuss our Payments to States under Mineral Leasing Act appropriation.

As I'm sure the Subcommittee is aware, most of the decrease in payments to States ($70.55 million) results from a proposed deduction to mineral leasing receipts to offset the estimated fire fighting costs proposed by the Department of the Interior's and the Department of Agriculture's fire fighting initiative. Since the States share the receipts generated from Federal lands, the Administration feels that it is only equitable that they share in the cost of protecting these lands.

Additionally, coal royalties decrease significantly due to one-time receipts from royalty rate readjustment cases that are expected to be settled in FY 1989. There will also be reductions from the full-year effect of the proposed coal product value regulations. These decreases are partially offset by increased bonuses and royalties from higher estimated oil, gas and coal prices.

Mr. Chairman, members of the Subcommittee, I have only touched on some examples of the directions we expect to continue and build upon as MMS begins the new decade. I hope our two themes provide a focus for the MMS programs and a framework for viewing the MMS budget request. I would be happy to respond to any questions the Subcommittee may have.

BIOGRAPHY OF ROBERT E. KALLEM

Robert E. Kallman was appointed Director of the Minerals Management Service (MMS) on October 24, 1988. The MMS has the responsibility for the Federal Government Outer Continental Shelf mineral leasing and operations programs as well as the collection and distribution of mineral royalties from Federal and Indian lands.

Mr. Kallman had been the Special Assistant to the Secretary of the Interior, Western Representative for the past 3 years prior to his appointment with MMS. In that capacity he dealt with a broad range of difficult issues including the offshore leasing program.

Mr. Kallman is a native of Santa Barbara, California, and has held many elected positions that include Santa Barbara Board of Education, 1963-1969; Santa Barbara County Board of Supervisors 1974-1985; President, Southern California Association of County Supervisors; Chairman, Tri-County Oil Committee; and member, SCAGS Oil Committee. Mr. Kallman's public appointments include State Council on Development Disabilities, Department of the Interior OCS Policy Committee, South Central Coast Regional Coastal Commission, and California State Coastal Commission Alternate.

Mr. Kallman is the author of three published books entitled, "Coastal Crude," "Stop Justice Abuse," and "Shipwrecks, Smugglers and Maritime Mysteries."

Mr. Kallman was a member of the U.S. Naval Reserve from 1943-1978 and served on active duty during World War II and the Korean Conflict. He retired as a Captain.

Mr. Kallman has received numerous awards that include the Freedom Foundation, George Washington Medal; Sons of the American Revolution, Good Citizen's Award; Exchange Club, Golden Deeds Awards; U.S. Jaycees, Award of Merit; P.T.A. Lifetime Honorary Member; California Teachers' Association, Award of Meritorious Service; Anti-Defamation League, Distinguished Citizens Humanitarian Award; Korean Veterans' Association, Ambassador for Peace Award; De Molay, Legion of Honor; Boss of Year, American Businesswomen's Association; Patriot of the Year, Scottish-Rite; Honorario Italiano, Society of Italian-Americans; Distinguished Service Award, Council for Retarded Citizens; Paul Harris Award, Rotary Club.

He has been married to the former Ruth Davis for 42 years, has four grown children and his home is in Santa Barbara, California.

BIOGRAPHY OF JEAN W. BAINES

Since September 1988, Jean Baines has been detailed to the position of Acting Assistant Director for Administration. Administration is responsible for the administrative activities of the Minerals Management Service (MMS). These administrative functions include financial management; personnel management and training; safety and health program management; procurement; property and space management; office services; personnel and physical security; and information resources management functions, such as automated data processing, management analysis, records and paperwork management, and printing.

Mrs. Baines was selected in 1982 for the position as Personnel Officer for the MMS. As the first MMS Personnel Officer, she was responsible for organizing and staffing the MMS Personnel program. Prior to this she served in a variety of personnel/administrative positions with the Navy Department, Department of Housing and Urban Development, and the Department of Transportation where she was the first Director of Personnel for the Office of Inspector General (OIG).

She is a graduate of the Department of Interior's Senior Executive Service Career Development Program (1985), and received the Department of Interior's Meritorious Service Award in 1987. A native Virginian, Mrs. Baines was born in Richmond, Virginia. She attended the American University in Washington, D.C.

BIOGRAPHY OF GARY S. FOY

Gary S. Foy is the Acting Chief, Budget Division for the Minerals Management Service.

Mr. Foy has been involved in formulating and executing the MMS budget since the agency was created in 1982. He has served MMS as the Program Analysis Officer for Offshore Minerals Management. He also has been a Senior Program Analyst in the Royalty Management Program and Chief of the Budget Execution Branch of the MMS Budget Division.

Prior to working for MMS, he held positions as a Budget Analyst with the U.S. Geological Survey and a Senior Cost Analyst with the Washington Metropolitan Area Transit Authority (Metro).

Mr. Foy received a bachelor's degree (BBA) with a major in accounting from George Washington University in 1976. He resides in Northern Virginia.

OPENING REMARKS

Mr. KALLMAN. My opening statement is really the prepared statement that we submitted, and I will not go into that.

Instead, I want to talk about my background, my philosophy, and how it pertains to my new job as Director of the Minerals Management Service. I have a background as an elected official in Santa Barbara, CA, since 1963. And during that entire period of time, I faced the offshore development issues and one as a pro-offshore development status, of course with a very strong environmental status and protection along the way.

At the time of the 1969 oil spill in the Santa Barbara Channel, I was city recreation commissioner and I was concerned, I guess horrified is a better word, at the site of our blackened beaches and the dying birds.

And I will tell you now that if we weren't conservationists before that spill, I think everybody from Santa Barbara has become a conservationist in one way or another since that time.

I've had the opportunity of sitting on the California Coastal Commission since its beginning in 1972. I served on that body in one capacity or another until 1984. And, again, we dealt many, many times with the offshore program in the Santa Barbara Channel off the coast of California.

In 1974, I was elected to the Santa Barbara Board of Supervisors, and served for three terms until Don Hodel asked me to be his western representative in 1985, where I have been for the past 3 years.

Throughout all of those years, one of the major issues that faced both local and State-elected officials was the Federal Offshore Program. Therefore, I feel I've had more than my share of involvement with that program.

The royalty management part of the Minerals Management Service is relatively new to me. I made an effort in the past several months to become involved with the issues and operation of the program, and it seems, frankly, as an outsider looking at it really for the first time, that great strides have been made in meeting the obligations and the goals necessary to fulfill the missions of that program.

Secretary Lujan has stated that we all need to lower our voices so that we can hear each other. I fully support that concept. And I have always prided myself on being able to encourage discussion through cooperation and consensus and hope that I can do that in this job.

In view of that approach, I developed two themes for the Minerals Management Service. They are, first, to promote harmony through improved dialog and collaborative effort with all affected parties; and, second, to continue to develop a fair and more flexible management of the MMS program.

I hope that these goals will provide a framework for discussing the budget request.

INTRODUCTION OF ASSOCIATES

Thank you, and we will respond to your questions, of course. And I would like to introduce the people here with me.

On my right, is Bill Bettenberg, Associate Director for Offshore Management.

On my left is Gary Foy, Acting Chief of the Budget Division.

Next is Jerry Hill, Associate Director for Royalty Management.

Finally, there is Tony Itteilag, Director of the Budget for the Department of the Interior.

Behind me are other folks who can help you if they're needed.

FIREFIGHTING PROPOSAL

Chairman Byrd. As you indicated in your opening statement, which is being included in the record in its entirety, the administration's fiscal year 1990 budget proposes to fund the Department of the Interior and Department of Agriculture firefighting costs from timber and minerals receipts from the States.

This proposal would reduce receipts distribution to the States by $7.5 million in fiscal year 1990 according to the administration's estimates. I have a pretty good idea how that proposal will be received by the subcommittee, since 11 of our 15 members represent States who would lose over $26 million under the proposal. Your written remarks contain the following statement: "Since the States share the receipts generated from Federal land, the administration feels that it is only equitable that they share in the cost of protecting these lands."

How did you calculate the reduction each State would incur as shown on page 169 of the justification?

Mr. Kallman. They were based on a percentage of the total royalties. And I think I would like to ask Tony, would you answer that question?

Mr. Itteilag. Mr. Chairman, it was decided in consultation with the Office of Management and Budget that each State and the counties of western Oregon with respect to the O&C Lands Program and the counties with respect to the Forest Service would get an equal percentage reduction, which amounts to 18 percent, and which, in total, is $148.6 million.

That is the amount of the total firefighting that would be paid for by other than the Federal Government.

Chairman **Byrd**. Did you take into consideration the historical incidence of forest fires, or the number of acres of public lands in each of those States?

Mr. **Itteilag**. No, Mr. Chairman; that was not done. The idea was that this proposal would be viewed as an insurance policy, so to speak, and that everyone would pay the same rate.

That is because the presence of Federal lands in the States is thought to be of significant economic benefit, and that over a long period of time, there would be at least a sense of equity.

Chairman **Byrd**. Well, how do you arrive at that conclusion without considering the historical incidence of the fires in the various States and the number of acres of public lands in each of the States?

Doesn't it reduce itself to a numbers-crunching exercise? How does it produce equity if you don't take into consideration these two very important factors?

Mr. **Itteilag**. Mr. Chairman, one would have to say that it only produces equity in the same sense that an insurance policy would produce equity. It certainly doesn't produce equity in the sense that we know that some States, and some areas of States will have a higher incidence of fires, based on historical records.

Chairman **Byrd**. Well, I don't get the equity that results from the analogy of the insurance policy.

Let's talk about the number of acres of public lands in each of the States. Isn't that a very important factor to consider?

Mr. **Itteilag**. Yes, Mr. Chairman; it is a very important factor and one could posit a scheme whereby that would have been taken into consideration, but that wasn't the way it was done.

Chairman **Byrd**. Even insurance policies cost more in high-risk areas, don't they?

Mr. **Itteilag**. Yes, Mr. Chairman; that is correct. That often is the case.

Chairman **Byrd**. Then you are not applying that part, that factor to the overall insurance.

How did you calculate the reduction that each State would incur as shown on page 169?

Mr. **Itteilag**. As I indicated, Mr. Chairman, once the amount of the reduction in the payments to States account was developed, then each State was reduced on an equal percentage basis.

SOURCE OF FIREFIGHTING PROPOSAL

Chairman **Byrd**. Where did this proposal come from?

Mr. **Itteilag**. The proposal was one, Mr. Chairman, that came from a dialog between our Department and the Office of Management and Budget along with the Department of Agriculture, that is, the Forest Service, a part of the proposal, as you know, is one which we think very highly of, that is funding the cost of firefighting up front, so to speak, as a permanent, indefinite appropriation.

And we think that permanent indefinite part of the proposal has a lot to recommend it and is what we need in terms of getting us up front budgeting of firefighting.

And the Secretary in the end agreed with OMB that a portion of the costs should come from the States' accounts.

Chairman BYRD. So this is OMB's idea?

Mr. ITTEILAG. That portion of the idea which relates to deducting a portion of the receipts that would go to States and counties, yes, in fact, it did originate with OMB.

Chairman BYRD. Is that the Reagan administration's OMB or the Bush administration's OMB?

Mr. ITTEILAG. This was a proposal in the budget of former President Reagan and it is one that Secretary Lujan has already indicated to Members of the House and Senate that he went back to OMB on, once he became Secretary, and asked them to reconsider. And it was reconsidered, but it was not changed.

And I suspect it was not changed not because of lack of interest or lack of concern expressed by various Members of Congress and State Governors, but because one simply couldn't find $148.6 million that would be needed to replace that portion which is programmed to be funded by the States and counties.

Chairman BYRD. Is the administration continuing a second look at the proposal?

Mr. ITTEILAG. I guess I would say, Mr. Chairman, that not in the sense of the Secretary talking to OMB, but, yes, in the sense that as you noted earlier today, all of this money is in that category called domestic discretionary programs.

And so, if the Congress decides that this is not the way to go, then certainly the administration is not going to insist on this approach, as long as the overall terms of the budget summit agreement are met.

ACTIVITIES FUNDED BY SHARED RECEIPTS

Chairman BYRD. Can you describe generally the kinds of activities that the States fund with these receipts?

Mr. ITTEILAG. From listening to Members of the House and members of the subcommittee, I know, in fact, that a lot of this money goes into county education costs, county road construction, road maintenance costs, and the like.

And I understand that it is a very important source of revenue to these folks. Certainly, we would not disagree with that fact.

Chairman BYRD. This seems to be just another instance of the administration's deficit-reducing schemes which have very little chance of enactment, even if they had the support of the administration's own party, which I seriously doubt.

So that leaves Congress with the difficult task of meeting the deficit targets without resorting to these sorts of ploys.

Senator McClure, would you like to ask some questions?

Senator MCCLURE. Yes; I would, Mr. Chairman. Thank you very much.

ISSUES RELATED TO FIREFIGHTING PROPOSAL

I am concerned because there are several different issues that are involved in the firefighting proposal that has been made.

One is the assumption that somehow the States would like to help pay for the cost of suppressing fire in Federal lands, would the Federal Government like to help the States surpress fire on State lands. That seems fair to me.

If, indeed, there is a public interest in one direction, I assume there is a public interest in the other.

Mr. KALLMAN. I suppose, Senator, the reason for countering that might be that the funds are generated because of those particular Federal lands. And, therefore, this is a statement of the administration, and the States then have a responsibility to share in some part of the cost.

However, I can also understand the logic of your statement.

Senator MCCLURE. We could relieve you of the expense in another way which has been discussed in the past and hasn't gotten very far. You just deed all of those lands to the States and we'll take care of it.

I don't suppose though that that has very much support in the administration either. I won't ask you to comment on that since I know you've only been there a short period of time. This argument has gone on a lot longer than that.

But I really am disturbed that, again, we resort to the solution of a problem which we have by creating another problem. We only just recently got around to this question of the distribution of net proceeds versus distribution of gross proceeds. It has only been for a short period of time that the States have been happy with that.

The Federal Government over the years has been trying to get their hands into the States' pockets. The States finally slapped their wrists, got the hand out of the pocket, and now the Federal Government is trying to get their hand back in the pocket.

That's the way the States look at it. I wish we would quit it. The administration keeps on making these proposals and the Congress keeps on saying, "Hey, don't do that any more."

I think this is caused by two other processes in which we are both involved and we ought to look at those for an answer rather than this perspective on the problem.

The first is: How do you get the deficit back under control?

I am happy that, in recent years, there has been a bipartisan effort directed toward doing that, in spite of differences on how to do it and differences on the priority. But both parties are trying to get the deficit under control.

The second part of the process that ties in with the first, lies with the more limited question of how to pay for firefighting costs.

Years ago, we tried to make a direct appropriation for firefighting costs and we tried to make an estimate of what those costs would be. We then appropriated the amount that we had picked on the basis of recent history and included it in the appropriations bill.

It was always either too little or too much, and I'm not sure which causes the more distress. If we appropriated too much, then we cheated somebody else out of their share of the budget. If we appropriated too little, we had to come back with a supplemental.

So, Congress and the administration jointly agreed that we would quit that process, since there was no way to estimate on an annual basis what fire costs would be. We simply wouldn't appropriate anything up front. We would come back with a supplemental and fund what the actual costs were. That worked well until we discovered that that didn't work well in terms of deficit reduction. Thus, we needed to go back to some process of putting the money in up front.

Well, there doesn't seem to me to be any reason for us to again exacerbate the distribution of proceeds on a net versus gross basis. And this is just another one of those efforts as I view it. I still believe the best way you can resolve this problem is to have a supplemental at the end of the season and pay the bill.

Look what we've done in the Forest Service in recent years. We had a special assessment on a timber harvest under the K&V program. Every sale has within it certain activities that have to be funded to take care of what was done while the timber was being harvested.

Those K&V funds, like other dedicated funds, have been withheld by administrations in recent years in order to reduce the Federal budget deficit.

So the very legitimate reason as to why the money was paid in, in the first place, is now used to generate funds for expenditures in other areas. That is what we have been doing the last 2 or 3 years, in particular for firefighting funds. We have been invading those accounts to pay firefighting costs.

Now, who is kidding who?

That is the worst kind of trickery, and the American public says we shouldn't be doing it. I wish we would quit it. I wish we would start being honest with the public about some of these things. That is your responsibility and ours.

Stop using the smoke and mirrors and the pea under the shell. We've got some firefighting costs, let's admit it. We have some certain slash disposal and tree planting costs associated with a timber harvest, let's use the money; we charge a fee to the timber harvester and say, "This fee is to make sure those things get done."

And then we, the Federal Government, embezzle the money. You'd send anybody else to jail for doing that and, yet, we do it as a matter of policy.

I just don't understand using that kind of policy to run the Government. It is no more moral for Government to do it than for fellows paying the bookie. I wish we would quit it.

I do want to tap into your area of expertise and knowledge a moment because I want to understand from where the proposal came. I'm not blaming anybody or trying to give credit to anybody. At this point, I'm just trying to find out.

POSTPONEMENT OF THREE OCS LEASE SALES

The President has suggested that we postpone the three Outer Continental Shelf lease sales which were scheduled for fiscal year 1990. Was that the Department's idea or the President's idea?

Mr. KALLMAN. That was definitely the President's idea. In fact, the Department, including the Secretary of the Interior, was not aware of the proposal, I think, until the day that it was made.

JOINT TASK FORCE

Senator MCCLURE. Do you know how this would be used? As I understand it, there is going to be a joint Interior, DOE, and National Academy of Sciences task force to review and resolve environmental concerns of the three areas.

Is that what you understand?

Mr. KALLMAN. It has been expanded to include DOE and EPA.

Senator MCCLURE. We already have draft environmental impact statements. We have had public hearings, final environmental impact statements, and comments from Governors.

Those informational hearings have been held. I don't know how many volumes of discussion we could document already.

What additional information will the task force be analyzing?

Mr. KALLMAN. That would be dependent on what the task force decides they're going to do with themselves and their time. But, since the National Academy of Sciences has been named as part of the task force, I would assume that their expertise would be involved in some way.

The Secretary has stated that he is going through as many people as possible to gather information. It is difficult to know where new information is going to be found because we have spent a lot of money on environmental studies. The Department has spent $500 million over the years on such impact studies.

Senator MCCLURE. Repeat that more slowly so the reporter can get what that was. Was that billion or million?

Mr. KALLMAN. $500 million since the beginning of the studies back in the sixties. So we have a lot of information that has been accumulated.

I guess I look at this task force more as an opportunity rather than an impediment to the offshore program, frankly, because I think it will allow us the chance to sort of step back and take a look at where we are going because we haven't had a lot of success in accomplishing very much in that area.

And, perhaps, by getting the other experts, the other people from other Departments of the Federal Government, such as the National Academy of Sciences to come forward with a very high level review of this type of activity, it might lay to rest some of the problems that continue to plague us as far as proceeding with offshore development in some areas.

PROBLEMS WITH OCS LEASE SALES

Senator MCCLURE. You say problems continue to plague us.

Mr. KALLMAN. Yes, sir.

Senator MCCLURE. We're certainly not moving very far forward. I have to agree with that. But, does the fact that we are going back to review the environmental analysis, indicate that the administration believes that there are problems with the OCS statute? Or the Department of the Interior regulations?

Mr. KALLMAN. I don't know if that's what they believe or not. That hasn't been said. But I think that what the President said was that he wants to take a look at the southern California sale to see if there are any further environmental concerns that haven't been addressed, and then proceed with that sale if there are none.

In addition, he has put the northern California sale and the Florida portion of the eastern gulf sale on a longer hold than that, saying that he wants to postpone that indefinitely pending review.

Senator **McClure**. My interpretation, based on what I have heard other Members of Congress say, is that the whole program is on hold because as I remember hearing one Congressman from the State of Washington say, in effect: "You may think they are more concerned about the California coast than we are about the Washington coast, but I'll guarantee they're not."

They're saying, in effect, if there's that much concern there where it has been studied more, how are you going to tell us there is less concern here where it's been studied less?

Mr. **Kallman**. The reason those three lease sales were selected is that the income revenue from those sales was reflected in the 1990 budget and I think that is the only reason really that those three were selected over others.

Now, there are other areas that are just as controversial. You just mentioned one of them.

Senator **McClure**. It is made by this even more controversial.

Mr. **Kallman**. That is probably true, if that is possible.

Senator **McClure**. It has now shifted focus.

Mr. **Kallman**. We're really not going to go forward. There is a long way from going forward in Washington and Oregon because, if we do what is already scheduled, the first thing done in the fall, is the call for information. The sale will not take place, if we proceed on our present plan, until 1992. So there is a fair amount of time involved in that one.

Senator **McClure**. I'm worried about it, very sincerely worried about it, because I think the Nation needs to make some decisions and we ought to have the capacity to find a way to do it.

I guess I share the same hope you expressed. That maybe if we step back, analyze the process, and conclude that what we have done hasn't brought about the kind of result we wanted, we might find a way to bring about a different kind of result.

However, I have to tell you that I don't think that the impact is only in the areas that the President enumerated. I think the impact is on the entire OCS Program. And it exacerbates the problems in the other areas rather than reduces the problems.

AIR QUALITY REGULATIONS OFFSHORE CALIFORNIA

Let me ask you this question again. The Department recently published a proposed rule aimed at providing clear, tougher emission control standards for Federal oil and gas operations offshore California.

The rule would only apply to operations offshore California and, in many instances, is more stringent than the minimum requirements set forth in the Clean Air Act.

Does it seem logical to have the Federal Government complying with a rule which is more stringent than the law? The city of Los Angeles cannot comply with the law.

Mr. **Kallman**. This is a very complex issue, Senator. I spent 2½ years representing the Secretary on all of those negotiations in California.

The concern is that in the southern California air basin, which is the one that is really impacted, most or a good portion of the offshore emissions are blown onshore. They get trapped in the basin, and the basin is already a long way from meeting Federal air quality standards.

And, naturally, anything that contributes to that causes real problems. Secretary Hodel said early on that he hoped that we would find a way to ensure that no offshore emissions impacted in a negative way onshore.

The negotiated rulemaking took place to try to find a way of doing that. We met for a long time and we reached a lot of decisions.

However, the proposed rule that we have published does not have consensus of all of the folks that met in these meetings.

The public comment period closes on the 17th of April. By that time, we will have received public comment from the people who participated in the rulemaking process, plus many others. We're going to have to sit down and see if, in fact, this rule is going to be workable, is going to resolve any issues, and is going to be reasonable to the various entities concerned.

Senator McClure. Am I not correct in stating that this proposed rule is more stringent than the Clean Air Act law itself requires?

Mr. Kallman. It is in certain areas, yes, sir.

Senator McClure. And it imposes standards that the city of Los Angeles cannot meet on shore?

Mr. Kallman. Yes; that is correct.

AIR QUALITY REGULATIONS—INDUSTRY COMMENTS

Senator McClure. What have you heard so far from the industry?

Mr. Kallman. The industry was part of the negotiations. They were represented as one of the negotiating parties. Actually, the industry I think made a real strong concerted effort to try to make this work, and made a lot of concessions.

They couldn't reach agreement with the local governments in the State on everything, but they did reach agreement on some things.

We will be hearing from the industry now during this comment period.

AIR QUALITY MITIGATION

Senator McClure. We, the Federal Government, ought to do at least what a dirty industry on shore does. We ought to sell our dirty air increment, our license to pollute, if you will.

Mr. Kallman. What we attempted to do was create a tradeoff, a mitigation fee type process where an oil company producer offshore who creates *x* number——

Senator McClure. A license to pollute.

Mr. Kallman. They have to go to a 1.1 to 1 offset. In other words, they must remove 10 percent more pollutants onshore than they produce offshore.

Senator McClure. We will go buy the dirty air that someone else has.

Mr. Kallman. That's right.

Senator McClure. I just wish I had had a whole string of dry cleaning establishments throughout the Los Angeles basin. I could retire rich.

Mr. Kallman. All of those dry cleaning establishments, all of those other people who are polluting, the potential mitigation theoretically has already taken place. This is because the local air pollution control districts have already said they are going to use all of these type establishments as offsets for anything new that comes into the basin. The districts are not going to let sources located outside the basin use them.

So the mitigation type approach was killed because there was nothing left to mitigate.

Senator McClure. Then, what are the offshore operators going to buy on shore?

Mr. Kallman. We're not quite sure.

Senator McClure. We cannot buy automobiles as fast as Japan and Detroit turn them out and the clean air strategy for the nonattainment standards for the Los Angeles basin would during certain periods of the year require 90 percent curtailment of automobile traffic.

Isn't that correct?

Mr. Kallman. It would require—I guess it is 90 percent. A very high percentage of either curtailment or changing over to a nonpolluting fuel or source of energy.

Senator McClure. I have been an advocate of electric automobiles for a long time. We'll get that done yet, won't we? At least for Los Angeles.

Mr. Chairman, I have a number of other questions that I will submit for the record for response in writing, if I may.

Chairman Byrd. Yes, sir.

ABSORBING THE JANUARY 1989 PAY RAISE

Chairman Byrd. Your budget indicates that the Minerals Management Service will be absorbing the full cost of the January 1989 pay raise by reducing the FTE's that you will use in fiscal year 1990 by 48. The total cost of the pay raise is $3.3 million, which, divided by the 48 FTE's—which will be reduced in order to generate the $3.3 million—there is a figure of approximately $69,000 per FTE.

Is that your average cost per FTE in the MMS?

Mr. Bettenberg. That figure included the cost of travel, training, other kinds of support for the employees and not just simply their salary.

Chairman Byrd. What is the average cost per FTE?

Mr. Foy. Approximately $45,000.

Chairman Byrd. How would you break down the costs between salaries, benefits, and support costs? Can you do that for the record?

Mr. Foy. Certainly.

[The information follows:]

SALARIES, BENEFITS AND SUPPORT COSTS

In fiscal year 1990, MMS is proposing to absorb $2.48 million of the total $3.316 million cost of the January 1989 pay raise by the reduction of 48 PTE from the fiscal year 1989 level of 2,044 FTE. This absorption is equal to approximately $51,700 per FTE ($2.48 million divided by 48 FTE), which is broken down as follows:

	Per FTE
Salaries	$36,900
Benefits	6,900
Related costs, (for example, travel, training, supplies)	7,900

MMS EMPLOYEE TURNOVER

Chairman BYRD. Your budget indicates that you plan to achieve this reduction, which amounts to about 2.5 percent of your total FTE's, by attrition.

Is that correct?

Mr. KALLMAN. Yes, sir.

Chairman BYRD. What has been the turnover of MMS employees over the last several years?

Mr. FOY. On a cumulative basis, around 8.5 percent. We have had some underusage of our FTE in the past 2 years. We feel that we would be able to meet that through attrition.

Chairman BYRD. So your needs would be met through attrition of the 30 or the 40 FTE's are in grades GS-11. Is the level of reduction consistent with the previous attrition rates?

Mr. FOY. Mr. Chairman, the amount of attrition is hard to project in terms of what grades will be involved. That is an estimate based on the total number of employees and the rate of attrition that we have had.

Chairman BYRD. Based on your experience then?

Mr. FOY. Yes.

EMPLOYMENT LEVELS

Chairman BYRD. What is your current on board employment? What do you estimate it would be at the beginning of fiscal year 1990, and what would it need to be at the end of 1990?

Mr. FOY. Currently, we are at about ceiling level usage for FTE at this point.

Chairman BYRD. Which means? Which means what?

Mr. FOY. A ceiling of 2,017 FTE.

Chairman BYRD. What do you estimate it will be at the beginning of fiscal year 1990?

Mr. FOY. That is dependent upon our attrition rate and our refill rates. We would estimate that it would be a little bit lower toward the end of fiscal year 1989. So there would be a gradual approach to reaching that FTE reduction in 1990.

Chairman BYRD. Your budget indicates a personnel turnover in your Pacific regional office is 16 percent in 1987 due in part to the office's location in the high crime area.

The budget also proposes an increase in fiscal year 1990 to relocate that office to a more acceptable location.

Do you expect the reduction in FTE's will occur fairly evenly across your program?

Mr. KALLMAN. In Ventura?

Chairman **Byrd**. Across the program. You're going to locate from a high crime area to a more acceptable location and you think your attrition rate is going to take care of your needs. Do you expect the reduction in FTE's to occur fairly evenly across your program?

Mr. **Bettenberg**. If I could address it from the offshore standpoint.

Chairman **Byrd**. What would you do if some of your offices experienced high rates of attrition which adversely affect your programs in that part of the country, and you're unable to fill the positions because of the necessity to reduce the FTE's by 48?

Mr. **Bettenberg**. For the offshore program, Mr. Chairman, the attrition rate has been uneven. It has been running between 16 and 20 percent in our Los Angeles office over the last 3 years for a variety of reasons, including high cost, being in a high crime area, and so forth.

The attrition rate will definitely be higher there than it is throughout the rest of the offshore program, which is running around 7 percent. But what we have to do, hoping to accomplish the 2.5 percent across-the-board reduction in staff, is to have a higher fill rate for the Los Angeles office in order to maintain that.

So, while there will be a higher attrition rate in the Los Angeles office, at least until we get moved, there will also be a higher fill rate there.

POSTPONED COLLECTION OF REVENUES

Chairman **Byrd**. Your budget indicates that one of the impacts of absorbing the pay raise may be a reduction in the number of billings you issue, which would result in a loss of revenue to the Government.

How much? How much revenue do you anticipate would be lost?

Mr. **Hill**. It would be more of a postponed collection than an actual loss in revenue relative to our billings. It would be a matter of how current we would be with the collection process.

Chairman **Byrd**. How current would you be? What would be the variation?

Mr. **Hill**. In the area of billings, our billings consist of audit findings. It consists of exception processing. And it deals with errors as well as mismatches from the companies. We have been behind on that due to problems that began years ago with computer problems, et cetera.

We have been catching up on that and we intend—and estimate that we will—become current by May of this year.

So, it would simply be a matter of being slightly behind as compared to where we were years ago.

Senator **McClure**. May I ask a question at this point?

Chairman **Byrd**. Yes.

Senator **McClure**. I had assumed from what you put forward that it takes a little more effort to catch up because of the backlog. But, once you have caught up, you don't have to maintain the same level of activity to stay current as it took to become current.

I assumed that you were talking about a reduction that might be possible because you would have caught up the backlog. What you're actually telling me now is that you intend to cut back even further than that savings and start losing ground.

Am I correct? Is that the right interpretation of your answer just now?

Mr. HILL. If I understood the way you phrased it, no, sir. We have been in a catchup mode for a number of years. We anticipate becoming current by May of this year.

Senator McCLURE. Right.

Mr. HILL. So, we would not have a tremendous backlog. We would slip some.

Senator McCLURE. But then you're going backward.

Mr. HILL. We have been coming forward at that point. Depending on funding available, we would have to look at our priorities and see if we could maintain that level.

One of the big problems with the funding there is the increase in the cost of handling by contractors.

Senator McCLURE. I understand that.

Mr. Chairman, if I understand what I am hearing, it is that you don't intend to stay current once you get current. You expect to go back and start losing ground again.

To me, that is totally unacceptable. If you make savings because your volume of work reduces, because you have become current, God bless you. To the extent you are planning to become less than current, I would say, "Hey, wait a minute."

Mr. HILL. It really depends on a lot of things. And I'm not just trying to hedge an answer, but you are more efficient when you are operating currently. We hope that the new regulations, the clarity that we are trying to build into them, such things as that will lessen those numbers, the number of exceptions.

We haven't really had enough experience with that yet to see that that does pan out. And we are constantly looking at all of our priorities to see where we can best expend that money.

IMPACT ON EXCEPTION PROCESSING

Senator McCLURE. Mr. Chairman, I'm still not sure what I heard.

Chairman BYRD. I'm not either. Why don't you ask your question again?

Senator McCLURE. I'll try to rephrase it.

You certainly don't know exactly what your experience will be once you become current because you have never been current before.

Mr. HILL. Yes, sir; that is correct.

Senator McCLURE. So you're not really certain what your experience will be. Shouldn't you be planning to remain current rather than saying, "Well, we probably can't quite keep up with it, we'll slip back a little bit." or, "We will develop a little backlog over a period of time, because we're not certain how much manpower we will need to remain current."

Mr. Chairman, I'm frustrated because I just don't hear the answer being responsive to my question.

Mr. KALLMAN. I'm getting frustrated, too. Mr. Chairman, I think what happened was the 48 FTE reduction came down from the Department to us in a very short timeframe. We had to respond to it quickly in the budget document.

As we now sit back and have an opportunity to reflect on this and look at what is happening, perhaps the wording that is in that document probably doesn't reflect our thinking today.

Probably what we want to do today is work to redirect our resources to minimize the impacts so that we can attempt not to become less current than we are now.

Now, I guess what Jerry is saying, you cannot guarantee that we're not going to become less current, but it's certainly not going to be our goal.

Mr. HILL. You articulate it better than I did. That's what I was trying to allude to when I was talking about looking at our priorities as we gain more experience in trying to prevent that from happening.

Senator McCLURE. I want to hear two things. One is that you have a goal of maintaining currency.

Mr. HILL. Absolutely.

Senator McCLURE. And two, to the extent that you can tell us, whether or not that is possible with the FTE ceilings you are getting. That is one of the things that this Senator is going to look at, having watched that mess, and it was a mess—and I don't think there is anybody in the Department who has been happy with or proud of it. We put a lot of resources into it.

We have responded to your requests for those resources in order to get that mess straightened out.

I was going to ask you and didn't ask you if you got all of your pasteboard boxes empty yet.

Mr. HILL. I cannot guarantee that there is not a box or two. But, essentially, yes.

Senator McCLURE. We don't want to get back into that mess. It's been too painful to correct what occurred 10 or 12 or 14 years ago. And I don't want to hear from you any hint that we are now doing so well we can relax. If you've gotten beat up over anything over the last several years, it is that problem. Red flags went up saying: "Hey, wait a minute. We can't afford to slip back on that program."

And if you are having trouble, Mr. Director, with your FTE's and the FTE's that you have been given tell you that you can't keep current on that program, I want you to tell us that.

Mr. KALLMAN. Yes, sir; it is our hope that we can by redirecting resources by looking at them, keep current. If we run into a problem, we certainly need to run up the flag in a hurry.

Mr. HILL. And the FTE, if I may add, sir, reduction is not particularly relevant in this area as it is done primarily by contractors. It is just a matter that we are going to have to manage. That is a high priority area for some of the reasons that you referred to. The efficiency of doing it currently, et cetera.

Senator McCLURE. Thank you.

Chairman BYRD. Did you say that a reduction in the number of billings does not result in a loss in revenue?

Mr. HILL. There is a time factor in it, obviously.

Chairman BYRD. It just results in a delay?

Mr. HILL. In a delay. Interest is charged whenever they pay. For example, in the audit area, they pay at the IRS penalty rate because of the time value of money as well as having not paid promptly. So the Government does get its money.

It is a timing issue. We want to be current. That is our goal in all areas, not only because of the money that comes into the Federal Treasury, but how it is shared with the States, et cetera, whether we are auditing the principal or the interest.

FTE'S INVOLVED WITH BILLING

Chairman BYRD. How many FTE's are involved in this activity of billing?

Mr. HILL. Most of the billing, except for oversight with our own people, is done by contractors.

Chairman BYRD. Then you would not expect any reduction then in the number of billings?

Mr. HILL. By the FTE, no, sir.

Chairman BYRD. It is done by contract. It's not done by FTE.

Mr. HILL. Yes, Mr. Chairman; that is correct.

Chairman BYRD. And you don't expect any reduction in the number then of billings?

Mr. HILL. Only if the cost of the contracting were to go up. And we have asked for funding to address that issue, because of the contracting costs. That does have an inflationary factor.

Chairman BYRD. You don't use any of the FTE's for this activity?

Mr. HILL. For the billing itself, no, Mr. Chairman.

Chairman BYRD. Do you have an estimate of the average revenue generated by each FTE by this activity?

Are you saying that you don't use FTE's for this activity at all?

Mr. HILL. It does have oversight by our people, but it is a contracted function.

Chairman BYRD. What is the average salary cost of the FTE's in this oversight function?

Mr. HILL. Mr. Chairman, I don't know offhand. We would be glad to supply that for you if you would like.

DELAY IN BILLINGS

Senator MCCLURE. Mr. Chairman, could I ask a question at this point?

Chairman BYRD. Yes.

Senator MCCLURE. Again, I'm not quite clear. In response to the chairman's question earlier, you said that you expected there might be a delay in billings. But not a reduction in income to the Government.

Am I correct?

Mr. HILL. Yes, sir.

Senator MCCLURE. What would cause the delay in billings?

Mr. HILL. It is done by contract. We have asked for increased funding for contractors because of the additional cost involved in it. If we do not receive the additional funding, since the costs of them doing business increase, we would not be able to cover as much ground.

Senator McClure. Then we should redirect the question not toward FTE ceilings or reductions in FTE's, but toward the failure to get approval for increased funding for contract work.

Is that correct?

Mr. Hill. Yes, sir.

COST VERSUS RECOVERY FOR EXCEPTION PROCESSING

Senator McClure. Then the question probably ought to be on what you generate in billings for the expenditure that is reflected in the cost of doing the billings; rather than tying it to FTE's, let's tie it to the cost of running the program.

Mr. Hill. As I recall last year and I'm going on memory, but I think it was on an order of magnitude of $14 million. And this year it is anticipated to be approximately $10 million in receipts. And the exception processing function by contracts I think our total request is for $1.3 million.

Senator McClure. What are your total requests for money?

Mr. Hill. In this area?

Senator McClure. In this area.

Mr. Hill. I recall it to be $1.35 million.

Senator McClure. One point three-five?

Mr. Hill. $1.9 million.

Senator McClure. $1.9 million generated $14 million in returns.

Mr. Hill. Yes; last year.

Senator McClure. Last year. And you have asked for a slight increase in the $1.9 million, but you expect it to still yield about $10 million?

Mr. Hill. $1.9 million is the request for this year. It was a little less last year.

Senator McClure. If you don't get that increase, what would the revenue be during the same period of time? You say that over time it doesn't reduce, but will it cause a little delay in the billings? You will not get quite the same amount of billings out? You won't get quite the same amount of money back during this same fiscal year.

Mr. Hill. Senator, it would depend on how much money we didn't get if we—whatever fraction of the $1.9 million is received would be almost directly equivalent proportionately to the receipts that we had last year. It is a matter of the number of people working on the exceptions and taking the action to make those collections.

Senator McClure. If you get the money, your revenues will remain up.

Mr. Hill. We would expect them to, yes, sir.

Senator McClure. They were what before—14? And you expect them to be $10 million?

Mr. Hill. Yes.

Senator McClure. You have asked for an increase of how much?

Mr. Hill. The increase is $369,000.

Senator McClure. $369,000. And you said that would cut your receipts by $4 million.

Hill. No, sir; if I said that, I misspoke.

Senator McClure. OK.

Mr. **Hill**. We anticipate that the billings will decrease slightly. The collections will decrease slightly, even with the full amount of funding. The bills for those areas with the decline in prices, et cetera, are just going down.

Senator **McClure**. Let me ask the question this way.

Do you expect *x* number of dollars at current levels of expenditure?

Mr. **Hill**. Yes, sir.

Senator **McClure**. Less than last year but, nevertheless, *x* number of dollars. You've asked for $369,000 in order to keep your effort level as high as it has been.

Mr. **Hill**. Yes; $369,000 would be required to keep even.

Senator **McClure**. How much would you expect the receipts to decline in the same period of time if you didn't get the $369,000?

Mr. **Hill**. It would be roughly proportional. That would be about one-sixth, roughly.

Senator **McClure**. One-sixth of $14 million.

Mr. **Hill**. Of a figure slightly less than $14 million because of the decline.

Senator **McClure**. Say, $12 million. So it cost you about $2 million over the same period of time to save the $369,000.

Mr. **Hill**. Roughly, yes, sir.

Senator **McClure**. Thank you.

LANGUAGE IN BUDGET JUSTIFICATIONS

Chairman **Byrd**. In your justification, this is what you say: "In the interest of meeting Federal deficit reduction objectives, MMS is absorbing certain payroll increases in fiscal year 1989–90 through employee attrition."

And then you speak of the precise impacts being difficult to predict, but you say: "Reductions of some program outputs would occur. For example, MMS may be forced to reduce its exception processing effort, thus reducing the number of billings issued and the resulting collection of revenue."

Now you say on the one hand that the FTE's don't participate in the billings process. That is all done by contract. And then, on the other hand, you say that the number of billings is going to be reduced because you're going to have less employees through attrition.

Mr. **Hill**. I think that can best be answered, Mr. Chairman, by what Mr. Kallman alluded to earlier. When this document was put together, some of the responses we had were the best estimates we had at that time, when we received the notice of the reduction of FTE.

In looking at it now, that portion is contracted, a contracted function. So we will need the FTE to meet our overall budget reduction. But, looking now, it appears that with this funding that the billing process would continue and we hope to be at full strength.

Chairman **Byrd**. Didn't you know at that time the billing process was done by contract?

Mr. **Hill**. Yes, sir; we knew it was done by contract.

Chairman **Byrd**. Then why did you say that the attrition of employees would have a decided impact on the reduction of the billing?

Mr. **Foy**. Mr. Chairman, I think as Mr. Kallman alluded to, this was a general statement about workload outputs in general. We did not at the time of receiving the FTE reductions know exactly what the impact would be.

All of the programs are looking at what impact the least critical workloads would have on program performance.

Chairman **Byrd**. So you are going to stick with your statement as to the contracting that's done? The billings are done by contract; therefore, the attrition of employees would have no effect on the billings without reducing the billings, would not reduce the billings.

Is that what you're saying?

Mr. **Hill**. Yes, sir; there is a lot of work that goes on that is done by employees, that's where management of FTE reductions would be a key factor.

Mr. **Kallman**. Mr. Chairman, may I ask that we can go back and review this budget statement and then see what caused it, and what it is now and send you a corrected copy?

[The information follows:]

Correction to Budget Justifications

The last paragraph on page 109 of the fiscal year 1990 Budget Justifications for the Minerals Management Service should be corrected to read: "In the interest of meeting Federal deficit reduction objectives, MMS is absorbing certain payroll increases in fiscal year 1989 and fiscal year 1990 through employee attrition. Although the precise impact is difficult to predict, reductions to some program outputs will occur."

This corrects the previous statement by dropping the last sentence. Although final decisions have not been made as to what functions will absorb the FTE cuts, it has been determined that the exception processing function will be protected.

ADDITIONAL COMMITTEE QUESTIONS

Chairman **Byrd**. All right. Very well.

All right, thank you, Mr. Kallman, for your testimony.

The subcommittee will have additional questions for the record, I am sure.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR FRANK R. LAUTENBERG

Question: When do you plan to issue the draft Environmental Impact Statement for OCS Lease Sale 121? When do you plan to conduct the sale?

Answer: Issuance of the draft EIS is expected in the Summer of 1989 and the sale is expected to be held during the Summer of 1990.

Question: How much money will it cost the Department of the Interior to plan for this lease sale?

Answer: In answering this question the Minerals Management Service has made the determination that the planning of a sale will include prelease costs up to and including the publishing of the final environmental impact statement (EIS). Prelease activity beyond the issuance of the EIS is considered to be costs involved with the holding of the lease sale (i.e. proposed and final notices of sale; conduct of lease sale). The majority of the prelease costs would be in the planning phases and is dependent upon the number of staff assigned the various prelease activities of this and other sales in process.

It should be noted, however, that the Minerals Management Service does not account for funds by lease sale. It is estimated, based on current data available, that planning for lease sale 121 will have cost around $600,000 over a period of several years. This cost does not include estimated costs for environmental studies and reproduction and special processing of Geological and Geophysical data. These data are collected on a planning area, rather than on a sale specific, basis.

Question: What interest has industry expressed in this sale? Please attach all industry letters of interest.

Answer: The Call for Sale 121 included about 71.5 million acres. Based on block-specific industry interest expressed by four companies, with a fifth company providing non-specific nominations, the area identified for further study was reduced to only about 6.9 million acres. For this sale, unlike preceding sales, industry expressed interest in a very specific way, for specific areas. This enabled the MMS to identify distinct areas of interest to industry.

The five companies submitting nominations were: Texaco, Conoco, Mobil, Chevron, and Shell. The cover letters submitted with their nominations follow with proprietary information "blacked out".

Texaco [illegible]

November 9, 1987

CALL FOR NOMINATIONS
MID-ATLANTIC LEASE SALE 121

Regional Supervisor
Leasing and Environment
Atlantic OCS Region
Minerals Management Service
1951 Kidwell Drive, Suite 601
Vienna, Virginia   22180

Chief, Offshore Leasing Management Division
U.S. Department of the Interior
Minerals Management Service
Mail Stop 645, Room 4230
18th and C Streets, NW
Washington, D.C.   20240

Gentlemen:

Texaco Producing Inc. is pleased to submit the attached copies of the "Call for Information and Nominations Map" referred to in the Mid-Atlantic Call for Information and Nominations published in the September 30, 1987 Federal Register.

Texaco is seriously interested in the [redacted] areas that it has nominated. In addition, Texaco would like to have the opportunity to explore [redacted]

The primary lease term for all leases in the Mid-Atlantic should be ten (10) years, with a fixed 12.5% royalty and a minimum bid of $25 per acre.

Thank you for your consideration of Texaco's nominations and the above comments relating to the upcoming sale.

Yours very truly,

Glen C. Ware

Mobil Exploration & Producing U.S. Inc.

Oklahoma City/Land
November 11, 1987

Regional Supervisor
Leasing and Environment
Atlantic OCS Region
Minerals Management Service
1951 Kidwell Drive - Suite 601
Vienna, Virginia 22180

Chief, Offshore Leasing
Management Division
U.S. Department of the Interior
Minerals Management Service
Mail Stop 645 - Room 4230
18th and C Streets, N.W.
Washington, D.C. 20240

MID-ATLANTIC
OCS LEASE SALE 121
CALL FOR INFORMATION
AND NOMINATIONS
MID-ATLANTIC PLANNING AREA

Gentlemen:

In reference to the Call for Information and Nominations for Lease Sale 121, Mobil Exploration & Producing U.S. Inc. (MEPUS), as agent for Mobil Oil Corporation (MOC) and Mobil Oil Exploration & Producing Southeast Inc. (MOEPSI) forwards the attached map and exhibit listing the blocks that MEPUS would like to nominate for the lease sale. The blocks outlined on the map and listed on the exhibit are classified as [redacted] to MEPUS at this time.

Again, as stated in our letter dated July 27, 1987, MEPUS would like to encourage the Minerals Management Service to continue the pre-sale preparation activities leading up to Sale 121 proposed for October, 1989.

If you need any additional information, please contact me at 405/841-2413.

Sincerely,

for Ronald L. Brewer
Land Acquisitions Manager

Chevron U.S.A. Inc.
935 Gravier Street, New Orleans, LA 70112

November 5, 1987

Call for Information and Nominations
OCS Sale No. 121 (October 1989)
Mid-Atlantic

Minerals Management Service
Atlantic OCS Region
1951 Kidwell Drive, Suite 601
Vienna, VA 22180

Attention Regional Supervisor,
Leasing and Environment

Gentlemen:

Reference is made to the Minerals Management Service's request for comments on the Call for Information and Nominations for OCS Lease Sale No. 121 in the Mid-Atlantic Planning Area as published in the Federal Register, Volume 52, No. 189, for September 30, 1987 on Page 36724.

In response to your request, Chevron U.S.A. submits the following comments:

Call for Information and Nominations

Chevron has an interest in [redacted] because we consider these to be areas of untested potential. We have attached hereto a list of the Blocks in the [redacted] protraction areas that we recommend for nomination, and we have designated each individual block [redacted]

Chevron does not have an interest in [redacted] Current interpretations indicate that the wells have tested the geologic features with hydrocarbon potential in the areas referenced above without beneficial results. Therefore, we have no interest in nominating these areas.

[redacted] Therefore, we have no interest in nominating these areas.

Enclosed please find one (1) copy of the Call for Information and Nominations Map designating those blocks which have been nominated by Chevron. It is understood that the identity of Chevron as a nominating party will become a matter of public record, but that Chevron's indication of interest in any particular block or area will be considered proprietary. If you wish to discuss the above nominations or need additional information, please contact Mr. B. H. Hunley at the letterhead address or at (504) 592-6734.

Yours very truly,

CHEVRON U.S.A. INC.

By G H Dearing
G. H. Dearing

Shell Offshore Inc.
A Subsidiary of Shell Oil Company

November 12, 1987

Regional Supervisor
Leasing and Environment
Atlantic OCS Region
Minerals Management Service
1951 Kidwell Drive
Suite 601
Vienna, Virginia 22180

Dear Sirs:

SUBJECT: COMMENTS ON THE CALL FOR INFORMATION AND NOMINATIONS FOR PROPOSED LEASE SALE 121, MID-ATLANTIC

In response to the subject Call, Shell Offshore Inc. (SOI) has identified areas in the Mid-Atlantic which may have low to speculative hydrocarbon potential. The enclosed map identifies these areas and is intended to help guide the Minerals Management Service in its final delineation of the proposed sale area.

As always, SOI is interested in the evaluation of frontier areas such as the Mid-Atlantic. We believe that this evaluation can best be served by several companies testing various concepts. Also, it is important that companies have full opportunity to conduct the prelease analysis necessary to identify prospects.

Therefore, we recommend that Sale 121 be delayed for a period of at least six months to allow the opportunity for additional seismic data acquisition. As seismic data can be acquired only during the summer and as processing of the data can take several months, a six month delay would make it possible to shoot seismic in the summer months of both 1988 and 1989.

At present, we are continuing to conduct low-level regional studies of hydrocarbon potential along the Atlantic coast. However, at this time, we are not in a position to make a firm decision about whether we would participate in a Mid-Atlantic lease sale.

Please contact me if you have questions or need additional information.

Sincerely,

James C. Patterson
Vice President
North American Exploration

Conoco Inc.
600 N. Dairy Ashford Road
P.O. Box 2197
Houston, TX 77252

November 11, 1987

Mr. Ralph Ainger
Regional Supervisor
Leasing and Environment
Minerals Management Service
Atlantic OCS Region
1951 Kidwell Drive, Suite 601
Vienna, Virginia 22180

Dear Mr. Ainger:

Call for Information and Nominations
Proposed Mid-Atlantic Lease Sale 121

In response to the Call for Information and Nominations for the Mid-Atlantic Lease Sale 121, published in the Federal Register on September 30, 1987, Conoco Inc. hereby submits the following comments which includes a detailed list of blocks nominated and the attached Call Map indicating our nominations.

Presently, Conoco's level of interest in acquiring leases within the Call Area is low. However, as firmly stated in our response to the Request for Information dated July 13, 1987, concerning Mid-Atlantic Sale 121, Conoco is in support of the sale being held as scheduled. Conoco's level of interest is low for several reasons.

The Mid-Atlantic Area has seen more exploratory drilling than other areas of the East Coast, even though the results have not been encouraging. Also, today's technology is not sufficient to develop hydrocarbons which might be found in the prohibitive water depths of this area which can exceed 4,000 feet. To our knowledge, Conoco's Tension Leg Well Platform, which is to be installed on Green Canyon Block 184 in the Gulf of Mexico in approximately 1,800 feet of water, will be the deepest producing platform facility in the world. Technology is being studied which could enable Conoco to develop reserves in water depths of 4,000 feet. However, the development of further new technology will depend upon economic conditions which allow for profitable development of hydrocarbon reserves in water depths such as those encountered along the East Coast.

Due to the above stated reasons, lower minimum bid requirements and reduced royalty rates are justifiable for a high risk and unproven area like the East Coast. Therefore, Conoco suggests that minimum bid requirements for Mid-Atlantic Sale 121 be lowered to $15.00 per acre and that the royalty rates be reduced to one-sixteenth. Conoco further suggests that high risk exploration expenditures could be made more attractive by suspending all royalties for a period of five years from the date of initial production. At such time as a lease has been producing for five years, production from said lease would then be subject to royalty.

While Conoco's current level of interest is low, such factors as future exploration by industry, improved technology, lower minimum bid requirements, and reduced royalty rates would enhance our interest in acquiring leases in the area.

Conoco appreciates the opportunity to comment on proposed Lease Sale 121. Should you have any questions or want to discuss this matter further, please call me at (713) 293-2267 or Mr. W. T. Prescott at (713) 293-2205.

Sincerely,

J. C. Patterson

Question: What is the Department's policy for proceeding with lease sale activities in the absence of significant industry interest in a sale?

Answer: The Department does not proceed with lease sale activities when industry interest is lacking. We have, in the past, cancelled or delayed lease sale activities when we deemed interest to be less than significant. This was done with South Atlantic Lease Sale No. 108, for example.

Question: What are the Department's estimates of recoverable resources for this sale?

Answer: Undiscovered, economically recoverable oil and gas resources expected to be leased, developed, and produced as a result of Sale 121, Mid-Atlantic Planning Area, are currently being estimated for the draft Environmental Impact Statement, which will be released this summer. Estimates of undiscovered, economically recoverable resources are available for the entire Mid-Atlantic Planning Area (leased and unleased resources). If hydrocarbons exist in commercial quantities in the area, 220 million barrels (Bbl) of oil and 5.35 trillion cubic feet of gas is the average (or mean) amount estimated. The range (5% and 95% probability) is 80 million Bbl to 470 million Bbl for oil and 2.4 trillion cubic feet to 11.5 trillion cubic feet for natural gas. The estimated chance of commercial hydrocarbons existing in the area is 44 percent.

Question: What are the Department's estimates of environmental and economic damage to New Jersey's coastal tourism and fishing industries from: 1. a major oil spill, 2. the negative visual impacts from oil and gas activities, and 3. the potential spatial conflicts with New Jersey's inshore coastal fisheries?

Answer: The Department is in the process of preparing an environmental impact statement for OCS Lease Sale 121. The Department is aware of and takes into account the importance of the tourist and fishing industries in New Jersey and our analysts are in the process of evaluating the potential environmental and economic impacts to tourism and fishing as a result of OCS development from Sale 121 as well as possible mitigation.

This offshore area is anticipated to be gas prone and, therefore, be less susceptible to oil spills. However, if an oil spill occurs from OCS oil and gas activities, the overall impact on commercial fisheries would likely be low. There could be an effect on some individual fishermen because of lost catch or damaged gear, which could be recovered from the Fishermen's Contingency Fund. However, no identifiable decrease in harvest would be likely. The loss to tourism would likely be low, with only short-term closing of some of the coastal areas.

Overall visual impacts are also anticipated to be minimal. The closest area to shore that is being considered for lease is 19 miles offshore. At that distance, because of the curvature of the earth, only the top of a 300-foot structure would be visible from shore. This type of structure would be in place for a relatively short period of time. In addition, most of the Lease Sale area is greater than of 25 miles offshore. Any structures which are located beyond this distance could not be seen from the beach.

The MMS estimates that spatial conflicts with inshore fisheries would be negligible because the closest lease block is 19 miles from shore. There could be some minimal conflict in docking space or repair facilities, but this is likely to be insignificant relative to the amount of facilities available in this area. Offshore, there could be some minor conflict with surface longline fisheries, dredgers, and trawlers. However, overall spatial conflicts are likely to be minor and would not affect the quantity of harvest.

Any potential impacts to tourism and the fishing industries in New Jersey will be taken into consideration prior to the Secretary's decision on the lease sale.

Question: Why hasn't the Department adopted the State of New Jersey's recommendations to delete: 1. All tracts within 50 miles of the shore, 2. Submarine canyon tracts and 3. Tracts which pose a problem of spatial exclusion with longline fishermen?

Answer: The Department is analyzing the State's recommendations in the draft EIS for OCS Lease Sale 121, as it would be premature to exclude these areas before they have been fully evaluated for likely environmental impacts. The tracts within 50 miles of shore and the submarine canyon tracts have been designated for specific study in the EIS. Also, longline fishing operations are being studied in the EIS along with other types of commercial fishing operations. Sale alternatives--tract deferrals--will be analyzed in the EIS as well as proposed mitigating measures for minimizing conflicts with other uses of the OCS. The draft EIS is expected to be published late this summer, and public hearings on the draft will be held within 60 days after it is published.

Question: Why hasn't the Department adopted the State of New Jersey's position of delaying the lease sale until there is sufficient industry interest?

Answer: The Department believes that industry has expressed sufficient interest in the Mid-Atlantic Lease Sale 121 to justify proceeding with the prelease process. A Request for Information and Oil and Gas Industry Interest for this sale was published in the Federal Register on May 29, 1987. Industry response was strong and was considered legitimate expressions of company interest.

Question: President Bush has proposed to delay three lease sales in what he called environmentally sensitive areas due to legitimate differences over their potential environmental effects.

A. How does the President and the Department distinguish Lease Sale 121 from these other sales?

B. Do the President or the Department feel that legitimate differences over the potential environmental effects of the sale do not exist?

C. Do the President or the Department believe that the waters off New Jersey are not environmentally sensitive areas?

Answer: The President's announcement of delays in three lease sales focused on sales scheduled to take place in Fiscal Year 1990--the budget year for which the President was announcing his revisions and which have experienced a great deal of past controversy. Although the special Presidential task force has been charged with examining these three particular sales, its findings may have bearing on sale decisions in other areas.

Sale 121 would be the sixth offshore lease sale in the Mid-Atlantic Planning Area. No significant adverse environmental impacts have been demonstrated as a result of the 32 exploratory wells that have been drilled in this area so far. It should be noted that this area is considered to be gas-prone.

The Department of the Interior believes that all coastal waters offshore the United States are environmentally sensitive to some degree and, specifically, the waters off the New Jersey coast have environmentally sensitive areas. In developing the 5-year leasing program, the Department uses criteria for ranking the planning areas specifically based on the potential effects of anticipated offshore oil and gas activities in each individual planning area. Many factors are incorporated into these criteria including the presence of endangered and threatened species, marine mammals, shoreline habitat, and complex hard or live-bottom habitat. Through a comparison of these factors we evaluate the environmental sensitivity of each planning area relative to all planning areas.

The draft environmental impact statement for proposed oil and gas Lease Sale 121, which is near completion, acknowledges there are some environmentally sensitive areas off the New Jersey coast and comprehensively evaluates the potential effects of the lease sale on these areas.

QUESTION SUBMITTED BY SENATOR J. BENNETT JOHNSTON

Question: I note that the Administration's FY 1990 budget indefinitely postpones OCS leasing activity on sale No. 116 south of 26 degrees North Latitude off the coast of Florida. Please clarify whether the proposed moratorium will apply to existing leases in this area. If so, what are the implications of this proposal and how do you intend to address them? For example, if it applies to existing lessees, do you plan to provide any kind of compensation to affected companies? What steps would you take to avoid prolonged litigation?

Answer: We believe that the proposed moratorium does not apply to existing leases.

The President directed that a task force be formed to study Lease Sales 91 and 95 offshore California and Part II of Sale 116 offshore southwest Florida. The task force is to report to the President by January 1, 1990. The task force is to examine in detail public concerns over potential adverse impacts of sales in these areas.

There are 73 existing leases south of 26° North Latitude. Exploration plans have been submitted by Unocal for Pulley Ridge Blocks 629 and 630 and by Mobil for Pulley Ridge Block 799. Both of these plans have been approved by the Minerals Management Service. The State of Florida has found both plans to be inconsistent with its Federally approved Coastal Zone Management Program. The action of the State in each case has been appealed to the Secretary of Commerce. Based on the time taken to review other appeals of oil and gas leasing issues, it is unlikely that the appeal process will be resolved sooner than the scheduled date for completion of the Presidential Task Force review.

On June 16, 1988, former Secretary of the Interior Donald Hodel announced that Sale 116 would be held in two parts, that Part I, which was held on schedule in November 1988, would not include areas south of 26° North Latitude and east of 86° West Longitude. Secretary Hodel also announced that an agreement had been reached with the State of Florida to form two joint task forces to review information on oil spill risks and potential impacts of drilling operations. These task forces are expected to complete their reports by June 1989. It is expected that the information to be developed by these task forces would assist in resolving concerns about exploratory drilling activities on the existing leases. The reports of these task forces also will be provided to the Presidential Task Force.

SUBCOMMITTEE RECESS

Chairman **Byrd**. The subcommittee will stand in recess until tomorrow, Tuesday, March 14 at 10 a.m., when the fiscal year 1990 budget estimates for the Indian Health Service and for the Office of Indian Education will be considered.

Thank you very much, and thank your associates.

Mr. **Kallman**. Thank you, sir.

Chairman **Byrd**. The subcommittee stands in recess until the time indicated.

[Whereupon, at 4:15 p.m., Monday, March 13, the subcommittee was recessed, to reconvene at 10 a.m., Tuesday, March 14.]

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1990

TUESDAY, MARCH 14, 1989

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD–116, Dirksen Senate Office Building, Hon. Dennis DeConcini presiding.

Present: Senators DeConcini and Domenici.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

PUBLIC HEALTH SERVICE

INDIAN HEALTH SERVICE

STATEMENT OF DR. EVERETT R. RHOADES, DIRECTOR

ACCOMPANIED BY:

- **DENNIS P. WILLIAMS, DEPUTY ASSISTANT SECRETARY, BUDGET, DEPARTMENT OF HEALTH AND HUMAN SERVICES**
- **MILBURN H. ROACH, ASSOCIATE DIRECTOR, OFFICE OF ADMINISTRATION AND MANAGEMENT**
- **BILL F. PEARSON, ASSOCIATE DIRECTOR, OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING**
- **DR. JACK PORVAZNIK, ASSOCIATE DIRECTOR, OFFICE OF HEALTH PROGRAMS**

PREPARED STATEMENT

Senator DECONCINI. Good morning, gentlemen, and thank you for being here this morning. This is the time scheduled for testimony on the programs of the Indian Health Service and Indian Education. We will begin with the Indian Health Service.

The fiscal year 1990 request for the Indian Health Service, for appropriated funds, is $1,083,399,000, an increase of $1,625,000 over the fiscal year 1989 enacted level. Increased operating funds are offset by reductions in the facilities account.

Testifying this morning is Dr. Everett Rhoades, Director of the Indian Health Service. Dr. Rhoades, thank you very much for being with us. We appreciate your testimony.

You may summarize your statement. We'll put your full statement in the record at this point.

[The statement follows:]

STATEMENT OF DR. EVERETT R. RHOADES

I am Dr. Everett R. Rhoades, Director of the Indian Health Service. I am accompanied by Mr. Milburn Roach, Associate Director, Office of Administration and Management, Mr. Bill Pearson, Associate Director, Office of Environmental Health and Engineering, Dr. Jack Porvaznik, Associate Director, Office of Health Programs, and Mr. Dennis Williams, Deputy Assistant Secretary for Budget, Department of Health and Human Services. We are pleased to be here today to discuss with you the Fiscal Year 1990 budget request for the Indian health programs.

The Indian Health Service (IHS) is the Federal Agency charged with administering the principal health program for the American Indians and Alaska Natives. The goal of the IHS is to raise the health status of approximately 1 million American Indian and Alaska Native people to the highest possible level. Its mission is threefold: 1) to provide or assure the availability of high quality, comprehensive, and accessible health services; 2) to provide increasing opportunities for Indians to manage and operate their own health programs; and 3) to serve as a health advocate for Indian people. In FY 1990, the IHS will continue its mission by providing comprehensive health services to American Indian and Alaska Native people.

Since the transfer of Indian health programs from the Department of the Interior to the Public Health Service in 1955, the health status of the Indians has continued to steadily improve. Comparison of the IHS and U.S. populations reflects the dramatic progress achieved during the past 30 years.

The ratio of the age-adjusted death rate for the Indian population to the U.S. population (all races) was 1.0 in 1986. This means that Indians are no longer dying at a faster rate than the general population. The infant mortality rate for Indians - 9.7 deaths/1,000 live births (1984-86) - was below the national level of 10.4 for all U.S. races in 1985, and Indian children are inoculated at a greater rate (86.6 percent) than non-Indian children (78.1 percent). However, Indians still have higher rates of death from certain causes, for example, more than twice that of the general population for accidents and diabetes, and three times for tuberculosis and liver disease.

The comprehensive health program of the IHS is carried out through two major systems: 1) a Federal health care delivery system, administered by Federal employees, and 2) a Tribal health care delivery system, administered by tribes and tribal organizations. Both systems include a full range of preventive, curative, rehabilitative and environmental services. The design differs from Area to Area because of variation in health indices, and facilities and services available from sources other than the IHS. The size of the Tribal health care delivery system represents the level and rate of participation of tribes or tribal organizations in Self-Determination activities. These activities are dependent upon and determined by the individual tribes themselves.

The Federal Indian Health Administration program includes 43 hospitals, 66 health centers, 5 school health centers, and approximately 100 smaller health stations and satellite clinics. In 1988, the IHS administered facilities provided for approximately 3.7 million ambulatory visits and recorded 76,000 inpatient discharges.

The Tribal Health Administration program includes 7 hospitals, 73 health centers, 2 school health centers and approximately 250 smaller health stations and satellite clinics. In FY 1988, the tribally administered facilities provided approximately 900,000 ambulatory visits and recorded 6,000 inpatient discharges.

For FY 1990, the budget request for the indian health appropriation is $1,083,399,000, a net increase of $2,583,000 over the FY 1989 comparable appropriation of $1,080,816,000. Additionally, an estimated $121 million will be available for Indian health services through reimbursements for a total program level of $1,204,099,000. The request includes a total program level of $296,590,000 for Tribal Health Administration, a 16 percent increase over the FY 1989 enacted level, and a total program level of $907,509,000 for Federal Indian Health Administration, essentially straight-lining the FY 1989 enacted level, reflecting the continuing increase in tribal administration. The FY 1990 request for the Tribal Health Administration includes estimated full funding for tribal contractor indirect costs.

During FY 1990, the IHS will continue the level of services authorized and funded in FY 1989, emphasizing quality health care delivery in both the Federal and Tribal Indian health programs. Resource allocation decisions will continue to respond to the most pressing health care needs of the Indian people. The separate requests for Tribal and Federal Indian Health Administration are intended to advance tribal health administration by providing increased flexibility to tribes and tribal organizations to administer health programs and improve service provision by locating program administration at the local level where it can be aligned to the needs of the local population.

Like the recent elevation of the Indian Health Service to full Agency status within the Public Health Service, a separate request for Tribal Health Administration will highlight the importance of tribes and tribal organizations in providing health care services as well as the potential for expansion in tribal administration. The separate Tribal Health Administration request will do much to assist in reaching our FY 1998 goal of entrusting 75 percent of Indian health hospitals and clinics administration to tribal health administration.

The IHS provides overall integration and coordination of the multiplicity of services of both the tribal and the Federal health care delivery systems, thus maintaining the comprehensive system of health care which has been so successful in reducing mortality of American Indians and Alaska Natives. This overall system prevents fragmentation which would weaken health services, slowing or reversing the progress that has occurred and decrease the quality of care provided. Equally important, the achievement of equity in the allocation of resources as mandated by court order and as requested by the Congress is greatly assisted by a comprehensive system.

The IHS will continue to focus on quality assurance, community based comprehensive care and the commitment to support activities that reduce health risk factors as well as treat diseases. This focus reflects new directions that have been brought about by earlier successes, such as efforts to ensure that medical staffs are fully qualified. Presently, more than 65 percent of physicians are either certified by the appropriate board or eligible for certification; 93 percent of the hospitals are now accredited by the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO); in the past 3 years the percent of IHS health centers accredited by the JCAHO has increased from 48 percent to 68 percent; and over 75 percent of IHS physicians have completed training in a medical specialty.

The IHS has increased its emphasis in health promotion and disease prevention activities. In FY 1988 ten such grants were awarded to assist Indian communities in the development of programs and activities to address the prevention of chemical dependencies, diabetes, heart disease, fetal alcohol syndrome, and other diseases heavily influencing health status in American Indian and Alaska Native communities. Examples of successful projects include: The Shiprock Youth Center project in New Mexico which is directed at health awareness, fitness and counseling of Indian youth; the Copper River Native Association project in Alaska which is directed at determining the rate of cancer occurrence and explaining means of reducing or preventing such occurrence; and the Zuni Wellness Center and Health Promotion project in New Mexico, a comprehensive health promotion effort emphasizing diet and fitness. In FY 1989, two grants involving over 20 American Indian and Alaska Native communities were awarded to evaluate the effectiveness of various health promotion strategies in these communities. Once the evaluations are complete, they can be utilized to further enhance or improve these health promotion strategies.

The IHS will continue the Secretary of Health and Human Services' Initiative on Indian Alcoholism begun in 1986 to combat one of the major health problems facing American Indians and Alaska Natives. Two regional treatment centers for youth, as authorized by P.L. 99-570, the Omnibus Drug Act of 1986, have opened with three additional centers scheduled to become operational in FY 1989.

Increased emphasis will be placed on active collaboration with tribal governments to strenthen tribal health delivery systems. Central to the effort is the Indian Self-Determination and Education Assistance Amendments (P.L. 100-472), which are aimed at removing barriers to the involvement of tribes in the management of tribal health programs.

During the past three years the IHS has expended approximately $86.5 million for the planning, design and construction of 9 new and replacement hospitals, 8 health centers and 516 staff quarters.

In addition, approximately $13,125,000 has been expended for major repair and renovation work at 35 IHS health care facilities. The two regional youth treatment centers mentioned previously have been made operational as a result of this program.

Because of the rapidly growing beneficiary population (about three percent each year) and a corresponding increase in demand for services, the IHS will continue to stress effective and efficient program management strategies.

In FY 1988, the IHS has provided approximately 5,000,000 ambulatory visits, an increase of more than 1,000,000 annual visits since 1980, a period in which there was a 23 percent increase in the service population. In order to more efficiently manage resources, the IHS is reviewing the current use of a fiscal intermediary to operate a nationwide claims processing system. The initial impression is that the use of the fiscal intermediary will increase efficiency in processing contract health services claims. For example, IHS' fiscal intermediary is paying over 85 percent of the claims within 28 days with less than a five percent error. In addition, the IHS implemented a payment policy based upon Medicare Prospective Payment System (PPS) Diagnostic Related Groups (DRG) for inpatient care as a cost containment measure. This policy has resulted in a savings of approximately $300,000 in FY 1987 and $2 million in FY 1988. Full year savings for existing contracts plus partial year savings on new contracts are projected to be $4 million for FY 1989.

The development of information management systems continues to be a major priority of the IHS. During FY 1989 the Resource and Patient Management System was enhanced by the development of additional components which will automate the medical and administrative records used by hospitals or clinics. These activities will increase both quality of care and administrative efficiencies through timely feedback mechanisms available in automation technology.

The IHS is conducting the study authorized in FY 1989 which will analyze the location of management personnel in relationship to service delivery sites and people to be served. When completed, this study will be shared with the Congress and tribal organizations prior to any final decisions. We expect to let a contract for this study in the third quarter.

Mr. Chairman, I will be pleased to try to answer any questions which you or other members of the committee may have on this FY 1990 budget request.

BIOGRAPHY OF DR. JOHN PORVAZNIK

John Porvaznik, M.D., F.A.C.S. is a board-certified general surgeon with 27 years of service as a Public Health Service (PHS) Commissioned Officer. He is a graduate of Dartmouth College and Harvard Medical School, and received his surgical training at the Massachusetts General Hopsital. His PHS career has included positions as Chief of Surgery at Tuba City, Arizona (1962-65 and 1970-76), Fort Defiance, Arizona (1966-70 and 1976-78), and Gallup Indian Medical Center, New Mexico (1978-86). During many of these years he held concomitant positions as Service Unit Director at Tuba City and Fort Defiance, and from 1981-1984 he was the Acting Director of the Navajo Area Indian Health Service (IHS).

He also held the positions of Senior Clinician for Surgery of the IHS 1976-87, and Medical Director of Emergency Medical Services of the IHS 1980 through the present. In this latter role he has provided international consultation to Saudi Arabia, Egypt, and the Caribbean basin countries.

In June 1986 he transferred to Rockville in the position of Associate Director, Office of Health Programs and Chief Medical Officer of the IHS.

He is married to the former Eunice Symonds, an R.N. and educator in vocational nursing; they have three children: John, a graduate of Arizona State University; Mark, a graduate of the U.S. Coast Guard Academy; and Mary a graduate of University of New Mexico and presently a PHS Commissioned Officer medical student at Uniformed Services University of the Health Sciences.

INTRODUCTION OF ASSOCIATES

Dr. RHOADES. Thank you very much, Mr. Chairman. Accompanying me, on my immediate right, is Mr. Bill Pearson, the Associate Director——

Senator DECONCINI. Yes; introduce your people, please.

Dr. RHOADES [continuing]. Associate Director of our Office of Environmental Health and Engineering.

To my immediate left is Mr. Milburn Roach, the Associate Director for our Office of Administration and Management.

To the left of Mr. Roach is Dr. Jack Porvaznik. He's the Associate Director of the Office of Health Programs.

And on the right of Mr. Pearson is Mr. Dennis Williams, a Deputy Assistant Secretary for Budget for the Department.

We appreciate the opportunity to be here, Mr. DeConcini, and I would just summarize only two or three points I think that I would like to emphasize.

There's been a great deal of general feeling, I believe, throughout the country that conditions are very, very bad in relationship to health. And not discounting the seriousness of the work that remains to be done in the field of health, I would like to take the opportunity to point out that, in fact, the health of Indian people does continue to increase. It continues to improve, whether one measures life expectancy or general mortality rates, with only a couple of exceptions. The mortality rates for the major disease of Indians are decreasing.

In addition——

Senator DECONCINI. What are those exceptions? Excuse me.

Dr. RHOADES. Cancer and diabetes.

Senator DECONCINI. Thank you.

Dr. RHOADES. We're not making great headway there. But, in all the others, the progress I see is fairly gratifying.

In addition, in the 8 years from 1980 to 1988, we have increased the number of ambulatory visits by almost 1 million. That represents a substantial increase in services that are being provided.

The inpatient load does not continue to increase, but that is a reflection of the changing nature of medical care and the improvements, I believe, in the general health.

Our focus will continue to be on quality assurance, providing the very best medical care that we can under the circumstances we have, with attention to community-based, comprehensive primary care as our major emphasis, moving more and more toward health promotion and disease prevention, with the single intention of manufacturing, so to speak, healthy Indians.

In relationship to this year's budget, I would also point out that there is a separate request this year for Tribal Health Administration, in addition to the Federal Health Administration request for appropriations. This is done to highlight the importance of the tribes and tribal organizations in providing health services themselves and is in accordance with the recent congressional amendments to the original 638 legislation.

Mr. Chairman, I certainly will be pleased to answer any questions that you may have.

LIFE EXPECTANCY FOR INDIANS

Senator DECONCINI. What statistics can you supply for this Senator regarding the life expectancy? Do you have it by geographic area, by tribal designation?

What is it on the Navajo reservation? Do you know, offhand?

Dr. RHOADES. I do not know, and because of the small numbers, one should be very careful in interpreting numbers tribe by tribe or even area by area.

I'm not sure that the biostatisticians would want to calculate longevity, but if I could just show you—if you would look on page 50 of the charts that I handed you——

Senator DECONCINI. We don't have any here.

Dr. RHOADES. Well, let me just show you here, and I can make the points from it.

This dates the life expectancy for Indians by decade, 1940, 1950, 1980. And you can see the Indians in your two left-hand columns. Going from a life expectancy in 1940 of about 50 to 55 years, and if you follow that across to Indians born in 1980, you can easily see that the slope of improvement for Indians is considerably greater than the slope for United States, all races. So that by 1980, Indians have nearly caught up. Now, they haven't quite caught up yet, but the life expectancy is about 72 years for both males and females.

And if you look closely at your far right, group 4 columns, you can see that the life expectancy of Indian women now is greater than the life expectancy of males of the general U.S. population.

LIFE EXPECTANCY BY TRIBE

Senator DECONCINI. If you have this kind of demographic information, why don't you have it on the tribal basis? Isn't that where you gather it?

Dr. RHOADES. But it is aggregated into a total. We can certainly do it that way, but I would guess——

Senator DECONCINI. I'm not suggesting you do a lot of work, but I'd sure like to see, such as my State, where some of the tribes, what their life expectancies are, whether or not there is a big variance and whether or not it has something to do with, it might have something to do with where they're located, if they're located in a metropolitan area, where the health services may be better on an emergency basis or dirtier air, they might be worse than if they're located out in the rural area.

That would be of interest to me, if it isn't too much of a burden, Doctor.

Dr. RHOADES. We have other kinds of indices that, as you correctly suggest by your question, show that the distribution of pathology and morbidity and mortality is quite uneven. And there are some tribes that are worse off than other tribes.

Using other kinds of measures; for example, a current index of the severity of disability in a community is a technique first described by the Centers for Disease Control and the Carter Center in Atlanta called the years of premature life lost.

We do have that area by area, and I'd be very happy to make that available.

[The information follows:]

Computation of California years of potential life lost [YPLL], 1984-86

[YPLL per 100,000 population under age 65]

Area	
IHS, excluding California	10,315.8
Tucson	13,684.7
Aberdeen	14,819.7
Bemidji	10,205.8
Albuquerque	9,842.4
Alaska	15,368.0
Billings	14,482.7
Oklahoma	5,379.0
Nashville	9,051.7
Phoenix	13,629.9
Portland	8,373.0
Navajo	10,135.5
Highest	Alaska
Lowest	Oklahoma
Total rates for remaining nine areas	104,225.4
Total divided by nine (California proxy)	11,580.6

Senator DECONCINI. I'd like to see that and anything you have on Arizona tribes.

Dr. RHOADES. Yes.

TRIBAL AND FEDERAL DISTRIBUTION

Senator DECONCINI. Dr. Rhoades, last year, for the first time in a long time, the Senate and the House passed all 13 appropriations bills and the bill was signed by the President on September 27, which is a couple of days before the beginning of the fiscal year. And you've been around here long enough to know how long we've worked on these CR's and how unrewarding and unproductive that is.

We're troubled, however, by information contained in the budget justification and provided to the subcommittee which displays the allocation by area of the fiscal year 1988-89 appropriations for health services.

According to this information, not all the funds appropriated by the Congress for 1989 have been distributed.

When were these funds allocated to the areas and service units? Can you give us that information?

Dr. RHOADES. Mr. Chairman, the apportionment of the 1989 appropriation followed a tribal distribution and an Indian Health Service distribution, as is reflected in the 1990 proposal. That turns out to be a fairly difficult administrative activity, particularly when one distributes the funds down to a tribal or service unit level.

We appealed to the Office of Management and Budget to exempt us from that requirement in the distribution of 1989 funds and the course of that appeal has consumed basically the intervening time. That is, the largest single reason for the slowness in allocating the balance of the funds and allocations——

Senator DECONCINI. I don't understand. Why did it take time? Because the OMB did not approve your petition or your——

Dr. RHOADES. That's correct.

Senator DECONCINI. Can the funds be apportioned in a manner different than what we passed in the law? You're asking it to be apportioned in two different categories here. Maybe we should have done that, but I understand that we didn't do that. We set it into one.

Do the attorneys say that OMB could split it out?

Dr. RHOADES. We haven't really asked that question.

Senator DECONCINI. What you've done is ask OMB to do that. Is that right?

Dr. RHOADES. Well, we asked them to exempt us from that requirement.

[The information follows:]

OMB APPORTIONMENT

A request has been made of the Office of General Counsel for an opinion on the OMB apportionment of the fiscal year 1989 appropriation. Once an opinion is provided, a summary of the conclusion will be shared with the committee.

Mr. WILLIAMS. The proposal was initiated by OMB rather than the Department. They've been interested in trying to concentrate—better keep track of moneys that go to the tribes as well as moneys that are expended by everything else.

Senator DECONCINI. They want to do it.

Mr. WILLIAMS. That's right.

Senator DECONCINI. And that's why it's taken so long to get the funds distributed.

Dr. RHOADES. That's the reason for it.

Senator DECONCINI. That's not a very good solution, in my judgment, Dr. Rhoades. Maybe you're satisfied with it, but it seems to me we need to do better than that.

Dr. RHOADES. No; we're certainly not satisfied with the delay, of course.

Senator DECONCINI. What are you doing to expedite that matter?

Dr. RHOADES. Let me ask Mr. Roach to give us more details about that. But we intend to proceed with the apportionment.

Senator DECONCINI. OK. Mr. Roach?

ALLOCATION OF FUNDS

Mr. ROACH. Mr. DeConcini, another influence on the issue that you just raised is that there were resources available at the time the budget was put together for which we had not had an area distribution at that time. Examples of that would be we received $10 million for indirect costs, for which, at the time, again, the budget was put together, we had not had an area distribution.

Most of the differences in the funds between what was shown as allocated in the budget and what was appropriated have since been distributed and allocated to the field.

Senator DECONCINI. They are gone now.

Mr. ROACH. Most of them.

Senator DECONCINI. Most of them. What, 80 percent? Ninety percent?

Mr. ROACH. I would say 60 percent, off the top of my head, I guess.

Senator DECONCINI. Sixty percent. Is that satisfactory now for you, or are you trying to expedite it further?

Mr. ROACH. We are in the final stages of arriving at the distribution of the other funds.

Senator DECONCINI. And when will that be?

Mr. ROACH. It would be our plan to be allocating those.

Senator DECONCINI. When will that be completed?

Mr. ROACH. I would say within the coming month.

TRIBALLY CONTRACTED FACILITIES

Senator DECONCINI. Under the self-determination contracts, the fiscal year 1990 budget justification identifies a goal of entrusting 75 percent of Indian health hospitals and clinics to tribal contractors by fiscal year 1999.

How was this goal determined, Dr. Rhoades?

Dr. RHOADES. That is a target that ensued following discussions with the Office of Management and Budget, Mr. DeConcini, and that is a number that was arrived at in those discussions as reasonable and probably reachable.

Senator DECONCINI. And what percentage of the hospital and clinic programs is presently contracted by the tribes? Do you know?

Dr. RHOADES. In aggregate, again, it's about 30 percent. For example, six hospitals are now operated by the tribes completely.

Senator DECONCINI. How many? Six?

Dr. RHOADES. Six out of 50.

Senator DECONCINI. Six out of 50.

Dr. RHOADES. Yes; and a substantial number of clinics. The increase was flat during 1984, 1985, and 1986. But it looks like it's starting up.

Senator DECONCINI. How long have those six been operating?

Dr. RHOADES. The number went to six just in this past year.

SUCCESS OF TRIBALLY CONTRACTED PROGRAMS

Senator DeConcini. And what's the track record on those that have been operating?

Dr. Rhoades. You mean how successful?

Senator DeConcini. The success of them, yes.

Dr. Rhoades. Very well.

Senator DeConcini. Are they more cost effective than you operating them?

Dr. Rhoades. I'm not sure that we have information that would permit that kind of judgment at the moment. The one thing that we have found, very, very strong, positive, in the tribes' operating program is that, not too surprisingly, they have a considerably greater degree of flexibility than the Indian Health Service does as a purely Federal program. So that they are able to tailor the program and to take advantage of other sources of funds in a way that best meets their local needs.

At the present time, I think it's a fair statement to make, although it has to have indepth analysis, that there is no real negative consequence.

Senator DeConcini. Is there a definite savings by doing this?

Dr. Rhoades. I'm not sure that we can show a savings. My impression would be that there are certain scales of economy that are desirable because of their increased flexibility.

Senator DeConcini. That you might not have, you mean.

Dr. Rhoades. That's correct.

Senator DeConcini. I see.

Dr. Rhoades. Yes, sir.

PRIVATE INSURANCE COLLECTIONS

Senator DeConcini. Let me talk about indirect costs for a minute.

For fiscal year 1990, the budget proposes the $73.1 million be available for the payment of indirect costs associated with tribal self-determination contracts. Of this total, however, $23.4 million is proposed to come not from appropriated dollars, but, rather, from collection of third-party reimbursements from private insurance.

What basis did you derive the $23.4 million from? How did you estimate that?

Dr. Rhoades. Yes, sir; that was estimated by utilizing what we call the patient registration system, which you might recall from a few years ago as part of our automated systems. That permits us to identify utilizers of the Indian Health Service who have private insurance.

A weakness in this number, I hasten to add, is that we do not know of those covered individuals what services might be covered. But based upon the number of individuals that do have private insurance, estimating the average number of visits per year, and the average cost per visit, for example, of an ambulatory visit, about $70, we arrived at this.

Senator DeConcini. At this figure. Is this the first time you've done this?

Dr. Rhoades. This is the first time we've done it in this way.

Senator **DeConcini**. And you'll see how close you came, of course.

Dr. **Rhoades**. Yes, sir; the estimate is at $40 million. The $23 is not all that we would expect to collect.

Senator **DeConcini**. What action do you have to take to proceed with the collections of this money?

Dr. **Rhoades**. The major activity that we have to get geared up is that it does represent a new administrative activity for us. People have to be trained. We probably will have to put some people on board to generate those moneys.

Senator **DeConcini**. Have you done that already?

Dr. **Rhoades**. We're in the process of doing that.

Senator **DeConcini**. You're doing that, getting ready for that.

And do you think you can collect this much money?

Dr. **Rhoades**. We believe that we can. I realized that experience may prove that not to be the case.

Senator **DeConcini**. What if you don't collect them? What do you do?

Dr. **Rhoades**. We will have to, then, go back to making those very difficult priority judgments about where to meet those needs. The requirements on the Indian Health Service now as a result of the recent amendments are that we will fund those indirect costs in full, which means that the only source for those funds would be out of the program.

INDIRECT COSTS

Senator **DeConcini**. Out of the program, yes. I hope you succeed. I notice your fiscal year 1989 appropriation includes $44.6 million for indirect costs.

Will this be sufficient to fund fully indirect costs in fiscal year 1989?

Dr. **Rhoades**. No; that will not completely fund all of the indirect costs in 1989, although it represents an advance.

Senator **DeConcini**. How short will you be?

Dr. **Rhoades**. I believe that we will be short by about $19 or $20 million.

Senator **DeConcini**. And if these funds for 1989 are not sufficient, what plans do you have to address the requirement? Where do you find that money?

Dr. **Rhoades**. The way that we have done that in the last few years is through negotiations with the tribes, who sometimes agree to take less than the amount of money for indirect costs. That is, the tribes absorb the additional costs. Or it comes out of the total.

Senator **DeConcini**. Not a very good solution for you.

Dr. **Rhoades**. That's correct.

Senator **DeConcini**. Have you given some thought to a better way to do that? I'm not suggesting that I have one, but it seems to me that you're left with a catch 22, that if you can't make it, which you haven't been able to on the indirect costs in 1989, then you go back and try to take it out of the tribes, and I'm sure they're not happy about that.

Dr. **Rhoades**. There are a number of other difficulties with— there are difficulties with the entire concept of indirect costs and what they mean and so forth. This has never been resolved to anyone's total satisfaction.

We certainly agree, and I think are committed in the choices that we have to make, that 638 cannot be adequately fulfilled unless the costs that are inevitably incurred by the tribes in taking the program over are met.

1989 FUNDING SHORTFALL

Senator **DeConcini**. What is the shortfall IHS is experiencing—in other words, what level of funding is really necessary in order for IHS to maintain the same level of services for 1989 as was provided in 1988, this year we're in right now?

Dr. **Rhoades**. Exclusive of construction, the number that we calculate is just over $45 million.

Senator **DeConcini**. $45 million. And that includes the $19 or $20 million that we talked about on indirect costs.

Dr. **Rhoades**. It does not include the indirect costs.

Senator **DeConcini**. It does not include the indirect costs?

Dr. **Rhoades**. That's correct. It's purely for services.

FACILITIES CONSTRUCTION FUNDING

Senator **DeConcini**. And what is your construction shortfall, Doctor?

Dr. **Rhoades**. Let me ask Mr. Pearson if he could address that. As you know, we have two large accounts, actually, in construction. One is for sanitation facilities construction. The other is hospitals and clinics construction. And I don't know that the term "shortfall" may be exactly appropriate in relationship to hospitals and clinics.

Senator **DeConcini**. Right.

Mr. **Pearson**. Mr. Chairman, we requested $22 million for 1990, fiscal year 1990.

Senator **DeConcini**. For 1990. And what is your shortfall in 1989? Do you know?

Mr. **Pearson**. Well, we don't really define a shortfall in construction, in that it's not a recurring program. The projects are funded annually on essentially a line-item basis.

Senator **DeConcini**. So what you've funded for 1989 you're going to spend out. And, then, whatever you're appropriated for 1990, you're going to spend out.

Mr. **Pearson**. That's correct.

Senator **DeConcini**. The shortfall is because we don't give you what you need.

Mr. **Pearson**. That's a reasonable description of the process.

Senator **DeConcini**. What you get, you spend it out.

Mr. **Pearson**. That's correct.

KAYENTA PERSONNEL QUARTERS

Senator **DeConcini**. I see. Last year, Dr. Rhoades, Congress provided language authorizing IHS to work with the Ganado Community Development Corporation on the construction of 10 to 12 housing units for IHS staff at Kayenta, AZ.

In return for an IHS payment of 50 percent of the initial construction cost, the corporation would build the units, operate and maintain them, and offer rates equivalent to rents that would be charged if IHS owned the units. The 50 percent IHS contribution is to come from unobligated facility construction balances.

What progress is IHS having in executing this agreement? And when do you expect to receive the cost estimates?

Dr. **Rhoades**. Let me ask Mr. Pearson if he might address that.

Senator **DeConcini**. OK.

Mr. **Pearson**. Mr. Chairman, we've been negotiating with the Ganado Housing Corporation. At the moment, we're awaiting some additional cost estimates from the corporation, the nonprofit corporation.

The preliminary cost estimates were based on a smaller house which didn't quite meet the requirements of our facilities. So we've given them the additional requirements.

They are at the present time preparing cost estimates to see what the additional cost would be. We have the impression that it will be a small amount, a relatively small amount. They've indicated that they're still going to try to provide it on a relatively nonprofit basis to the Indian Health Service.

Senator **DeConcini**. But you don't know yet.

Mr. **Pearson**. We do not know at this time.

Senator **DeConcini**. When will you have that?

Mr. **Pearson**. We had expected to know by the time of this hearing. We expect to receive the information today.

REGIONAL TREATMENT CENTERS

Senator **DeConcini**. I understand facilities for regional treatment centers in four different areas—one, Phoenix, Nashville, Navajo and Alaska—are being renovated and will be operational in fiscal year 1989. Each of these is to receive something like $750,000 for operational needs, with Alaska receiving some cost adjustment.

Based on the experience to date in Albuquerque and Oklahoma City, will these funds be sufficient?

Dr. **Rhoades**. It depends upon one's definition of sufficient, Mr. DeConcini. Our experience in the two facilities that have opened in 1988, the one at Acoma and the one at Tahlequah, OK, indicates that the original projections, in fact, are somewhat short; $750,000 for operation of those facilities will permit a base level of operation.

Senator **DeConcini**. What's the base level, Doctor, excuse me? What does that mean? About 75 percent of maximum?

Dr. **Rhoades**. That's one way to look at it. It would be about 75 percent of what we would call optimum staffing, with counselors and so forth.

The figure of $1 million seems to be very close.

Senator **DeConcini**. To what it would take for maximum.

Dr. **Rhoades**. For each of those regional centers, yes.

NEW FACILITIES STAFFING

Senator **DeConcini**. I see. You answered my question. In fiscal year 1990, funding is requested to provide staffing and operational costs for South Dakota, the Kyle center there, and the Rosebud Hospital, for $1 million.

In the request to the Department, however, IHS requested funding to allow for full operations at the Sacaton, AZ hospital, $1.2 million, and the Fort Thompson, SD health center, $300,000.

Additionally, IHS requested partial funding to address staffing and operation needs at facilities which will come onboard during fiscal year 1990, of $1.2 million and $700,000 for Washington and Montana.

The budget before the committee, however, includes no request for funds to operate these facilities.

What is the projected completion date, first, of the Sacaton and the Fort Thompson operations?

Mr. PEARSON. Mr. Chairman, the Sacaton facility and the Fort Thompson facility have both opened.

Senator DECONCINI. Yes, I know.

Mr. PEARSON. They both are in operation at this time.

Senator DECONCINI. Along that line, let me ask you about the Sacaton one. They seem to be short of staffing there, from what the Governor advises me, recently meeting him. From what he told me, it was substantial.

Can you give me any idea what's going to happen there?

Dr. RHOADES. I'm sorry, Mr. DeConcini. We agree with the assessment that there is a relative shortfall at Sacaton.

Senator DECONCINI. What is that?

Dr. RHOADES. About 30 positions. As you know, almost all of our costs go into personnel, at about $1.2 million.

Senator DECONCINI. And will that be rectified in 1990?

Dr. RHOADES. I do not believe that we can get it rectified in 1990.

Senator DECONCINI. So we're talking about still a shortfall of thirty people in 1990.

Dr. RHOADES. Yes; I would expect that would continue.

Senator DECONCINI. And Doctor, excuse me for interrupting. What about Fort Thompson?

Mr. PEARSON. Fort Thompson is open now.

Senator DECONCINI. It's open, also, too?

Mr. PEARSON. That's correct.

Senator DECONCINI. And what's its shortfall, personnel-wise?

Dr. RHOADES. Along the same lines. We project about $280,000 shortfall.

Senator DECONCINI. I realize you don't have the money, but how do you justify having a brand new facility like Fort Thompson or Sacaton and then not being able to staff it? It's got to be a difficult situation, a professional dilemma it puts you in.

Dr. RHOADES. Terrible, yes, sir.

Senator DECONCINI. Or you wouldn't have asked for that big a facility if you didn't think you needed it.

Dr. RHOADES. Yes; that's correct. And I don't want to sound superficial or trite, but in making the decisions as to the allocation of resources, we try to take into account the totality of the program. And we're not really happy about those choices, but that's our best judgment.

Senator DECONCINI. Somebody has to make the call, right?

Dr. RHOADES. Yes, sir.

Senator DECONCINI. Well, Dr. Rhoades, I want to thank you for sending your people and assisting us on our special committee on investigations. We're going to participate with the Indian Health Services more on that. I'm trying to think who testified for us there.

Dr. RHOADES. I believe Dr. Vanderwagen may have appeared.

ARIZONA URBAN NEEDS ASSESSMENT

Senator DECONCINI. Yes; it was very helpful, his testimony and his offer of assistance.

Let me ask you one other question. In the fiscal 1989 appropriations for IHS, we provided $200,000 for a needs assessment of the unmet health care needs of the urban Indian population in Arizona alone.

Can you tell us the status of that needs assessment?

Dr. RHOADES. That is underway at the moment, Mr. Chairman, through our office of planning, evaluation and legislation. I'm not aware of any temporary or preliminary findings that have been made.

Senator DECONCINI. Do you have any idea when the completion date is on that?

Dr. RHOADES. I don't have it before me.

Senator DECONCINI. Do you want to supply that for the record?

Dr. RHOADES. It will be several weeks, but I will be glad to supply it.

[The information follows:]

STATUS OF THE ASSESSMENT OF THE HEALTH CARE NEEDS OF THE URBAN INDIAN POPULATION—ARIZONA

The Arizona Indian Health Care Needs Assesement is being conducted by the American Indian Health Care Association [AIHCA] through a contract and purchase order. AIHCA has collected the data, has prepared a preliminary analysis and a draft report. Upon review and approval by the Department of Health and Human Services, the results of the study will be presented to the committees. This is expected to be accomplished in the near future.

Senator DECONCINI. Well, we have a host of other questions here which we will submit to you and ask you and your staff to respond to them.

Senator DOMENICI. Mr. Chairman, I'm quite sure, here, again, that the problems I'm going to discuss about New Mexico and Indian alcoholism are not unique to New Mexico. I do want to suggest that, for starters, we have a deplorable situation, that must be addressed, Doctor Rhoades.

One county in New Mexico, McKinley County, in which the city of Gallup is the principal community, has six times the national average in alcohol-related deaths. This is the indicator of the seriousness of the alcoholism problem. McKinley County has the equivalent of 240 deaths per 100,000 deaths per year, compared to a national average of 43.

If my arithmetic is right, 6 times 40 is 240. The death rate is almost 600 percent higher in McKinley County than the national rate of death attributable to alcoholism.

The Indian Health Service has been asked to do many things for the Indian people by this Congress. I am very pleased with your new initiatives. You're trying to make the Indian Health Service get into step with modern times by expanding into research areas, such as cancer research for the Indian people, into Indian aging issues, which we have neglected, and I compliment you for these efforts.

I submit, however, that we have a crisis. We have a crisis of alcoholism among the Indian people, in particular, among the Navajo Indians. They don't serve alcohol on the reservation. As a consequence, the abutting communities to the reservation that sell alcohol are absolute magnets for literally thousands of young Navajo people. What happens is they go into the communities, drink, and often become alcoholics.

My State and this country need, in my opinion, the total involvement of the Indian Health Service in attempting to at least address the chronic problem. The problem here and now is the treatment of alcoholics and their rehabilitation.

You cannot do the rest. We need economic development. We need jobs. The facts are terrible. We rehabilitate people, but most cannot find jobs. No rehabilitation program in the country is going to work if you run them through rehabilitation, and there's nothing meaningful for them to do. We've got to solve that.

In the meantime, Doctor, first, are you familiar with the seriousness of the problem? And second, without any new commitments on your part, would you agree to at least be a participant in our efforts to find a community or regional solution to the problem of the shortage of alcoholism treatment facilities in McKinley County and the surrounding counties of Arizona?

Dr. RHOADES. Mr. Domenici, I certainly cannot improve on your summation of the problem and the definition of the magnitude of the problem.

I'm prepared to make a commitment insofar as it's possible to us to do that. What I intend to do is eliminate alcohol and its abuse as a problem for Indian people. I believe that that is achievable. I think a great difficulty that we all had in the medical profession for many years was to assume that it was not a soluble problem. I think that that was a severe hindrance.

What I propose to do—I believe, also, except for certain areas in which we need more information, I think we have enough information at hand. Largely, as a result of our health promotion disease prevention efforts that Congress played a leading role in, as well, and, as a matter of fact, the State of New Mexico played a leading role in, makes me mildly optimistic.

We now have a program that we're putting in place called a planned approach to community health, measuring those risk factors that are existing in a community, identifying them, and then planning an attack to deal with them. It needs to be directed toward the youth. It certainly is wrapped up with the whole business of self-esteem, whatever all of that is. And I think that low self-esteem is largely a learned phenomenon.

If that's true, then individuals, I think even unemployed individuals, can learn that their life has esteem.

My theory is, and I guess I ought to phrase it that way, is that, again, very much as you just described the elements related to education, that all of these disparate elements have got to be brought to bear. They've got to be targeted.

And what I propose to do is to see if we can find, at first, a small number of communities. I think if ever there is a situation in which demonstration projects ought to be tried first, it's in the field of alcoholism.

I believe that the pioneering efforts by the Alkalai Lake community in British Columbia have proved that it can be done, and I think, gosh, we have to be smart enough in the United States to be able to emulate that.

And I take very seriously my commitment. I would hope that perhaps I could play a substantial role in ridding the Indian people of this major scourge.

I need to say this with extreme care, but I think it is in accordance with the comments that you just made also, is that funding clearly is not the answer to the problem, certainly, viewed from the standpoint of, gosh, if we just had $10 million more here or $15 million more there.

If that is not applied appropriately, it certainly is not going to deal with the problem.

One of the difficulties is going to be that individual responsibility for one's own health is going to have to play a large role in this, and attitude change on the part of the community, the ownership of the problem by the community, means that the role of the Indian Health Service will have to be different. But I think that we're prepared to rise to that challenge.

That is, there is no penicillin to give, obviously. There's no inoculation to give. But I think that we can facilitate, we can coordinate, we can stimulate, and we can direct, except for the additional confounding factors of McKinley County and off-reservation and all of that. That is just a relatively smaller addition, as important as it is, to the basic underlying problem.

I would like for us to be more responsive than we've been, and I will certainly see to it that we do so.

Senator DOMENICI. Thank you very much, Doctor. I understand that, with reference to this particular chronic problem in Gallup, NM, that you intend to be helpful in an effort to see what meaningful role IHS can play in what is planned by the community. I appreciate the priority you are putting on efforts to truly address the alcohol problem, and your commitment that and that you will have somebody in Gallup at regular intervals to talk about this issue and work on it with the local people. I look forward, in particular, to IHS participation in meetings in Gallup next week, when both Senators are going there for that very purpose.

Do I understand correctly that you're going to have somebody there to evaluate the alcoholism problem with us and to be of what help you can?

Dr. RHOADES. I will have at least two people there, Mr. Domenici, since it will not be possible for me to attend because of a prior commitment to the Red Lake Reservation. I'll ask Mr. Singyke, my deputy, who is here today, to attend. And, in addition, the head of our alcohol branch, Mr. Russell Mason, who is the repository, the expertise related to alcoholism.

I've asked both of those individuals to be available to you.

Senator **Domenici**. I have nothing further Mr. Chairman. I want to thank you, Dr. Rhoades, for the professional manner with which you have been able to handle difficult problems. I really believe that overall the Indian Health Service, while not always without some complaint or another, has done a rather remarkable job under difficult times and difficult circumstances. I compliment you and the people that work for you for your dedicated efforts on behalf of the Indian people.

Thank you very much.

Dr. **Rhoades**. Thank you so very much. I will see that our employees receive that message from you to whom it is more appropriately directed.

ADDITIONAL COMMITTEE QUESTIONS

Senator **DeConcini**. Thank you. Thank you, Dr. Rhoades. There will be some additional committee questions which we will submit to you for your response.

Dr. **Rhoades**. Thank you. I appreciate your interest.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

FUND ALLOCATION

Question. Why weren't actions taken to expedite the distribution of the funds?

Answer. The Department of Health and Human Services (DHHS) and Indian Health Service (IHS) appealed a decision by the Office of Management and Budget of apportioning the fiscal year (FY) 1989 appropriation into a Federal Health Administration account and a Tribal Health Administration account. This was viewed by the DHHS and IHS to be a conflict with the structure of the IHS appropriation. The allocation of these funds was delayed pending the response to the appeal.

Question. Where are the remaining funds? Does IHS establish a reserve set-aside with the funds appropriated for health services to address unforeseen emergencies?

Answer. All FY 1989 recurring funds have been issued to the Areas and the balance including amounts for unforeseen emergencies is being held by Headquarters for future distribution.

Question. What is the size of this fund? (It has been as high as $100 million.)

Answer. The size of the fund varies from year to year based on the level of need for such items as Physician Special Pay, change of station costs, etc.; but, has never been as high as $100 million. These expenses which vary from year to year and Area by Area are issued to the Areas as the costs are incurred. Other items such as research, evaluation, and recruitment are also allocated on an as-needed basis. In FY 1989, the total fund amounts to $64.5 million.

Question. How are expenditures from this fund determined?

Answer. The expenditures for the special pays are determined by formal and official pay schedules; the expenditures for change of station costs are based on the actual billed charges for movement of household goods and other related costs; and expenditures for such activities as research, evaluation, and recruitment are based on projected funding needs for these activities and are carried out through such means as contractual arrangements with qualified firms or directly by IHS staff.

Question. When are these funds released and distributed to the Areas for normal health service expenditures?

Answer. As mentioned earlier, special items in the fund are allocated as needed. If unforeseen emergencies do not use all of the available funds by the beginning of the fourth quarter, the remaining balances are allocated based on the relative unmet needs of the Areas.

Question. Under what authorities does IHS set these funds aside?

Answer. These funds are being managed in accordance with the needs of the Agency which are consistent with the mission and goals of the IHS as authorized by the law and are being spent consistent with the purpose for which they are appropriated.

SELF-DETERMINATION GOAL

Question. The FY 1990 budget justification (p. 48) identifies a goal of entrusting 75 percent of Indian Health hospitals and clinics to tribal contractors by FY 1998. What steps is IHS taking to work with the tribes who wish to enter into self-determination contracts for health services?

Answer. Staff of the IHS provide various types of technical assistance to tribes expressing an interest in contracting under the provision of Public Law (P.L.) 93-638.

In addition, the IHS has developed and implemented the Tribal Management Program for American Indians and Alaska Natives to distribute tribal management funds. Tribal management funds are utilized to support nonrecurring direct and indirect costs for general tribal development, development or improvement of management systems, general health planning, evaluation, training, etc., and other activities designed to improve the capacity of a tribal organization to enter into P.L. 93-638 contracts. This grant program awards tribal management funds to tribes and tribal organizations on a competitive basis.

Question. IHS is proposing a dual appropriation account structure to replace the current services and facilities accounts. This new structure is intended to identify clearly the different resources provided for tribally and Federally administered health programs. Facilities funding is merged in with the Federally administered program. What effect do you foresee this dual account structure having on the delivery of health care services to Indian people?

Answer. Under self-determination contracts, the tribal programs continue the comprehensive preventive and curative service delivery systems initiated by the IHS.

Question. What input have you received from the tribes regarding this proposal?

Answer. The IHS did not consult tribes regarding this proposal during the formulation of the FY 1990 budget.

Question. One concern about two separate appropriation accounts is the potential for a shortfall in either of the two programs. To address this concern, IHS has proposed appropriations language which would allow the transfer of funds between the two accounts. What assurances can you give the Committee that if such a proposal were approved, funds would be made available promptly to ensure continued delivery of services?

Answer. Language is included to allow transfer between the two appropriations. We are preparing specific guidelines to ensure the continuation of delivery of services. The mechanism and guidelines for this are currently under discussion between the IHS, DHHS, and the Office of Management and Budget. Once these are completed this issue can be addressed.

Question. Would an alternative to the dual account structure be a restructuring of the present Indian Health Services account to display separately the Tribal and Federal programs?

Answer. A display of estimated amounts available for Tribal and Federal programs within the current activity structure would be an alternative.

INDIRECT COSTS

Question. For FY 1990, the budget proposes the $73.1 million be available for the payment of indirect costs associated with tribal self-determination contracts. Of this total, however, $23.4 million is proposed to come not from appropriated dollars, but rather, from collection of third-party reimbursements from private insurance. Are the administrative mechanisms in place both to identify possible collections and to handle and process the actual collections?

Answer. Yes. Identification of persons with private insurance coverage is a part of the Patient Registration System. The actual billing system is under development and will be operational later this fiscal year.

Question. Will you seek a supplemental request if the projected collections don't materialize?

Answer. We do not expect a supplemental appropriation will be requested.

Question. The fiscal year 1989 appropriation for IHS included $44.6 million for indirect costs. If the FY 1989 appropriation is not sufficient, what plans does IHS have to address this requirement?

Answer. There will be no additional monies available from the IHS for the support of indirect costs incurred by tribal contractors in FY 1989. However, we expect to collect $40 million from private insurers in FY 1990--$23.4 of which will go to tribal contractors. Within the total FY 1990 IHS operating budget of $1.2 billion, funds will be reallocated, if necessary, to ensure that $73.2 million is available to fund tribal self-determination indirect cost requirements.

Question. What will be the effect of this shortfall on the tribes who are incurring these Indirect Costs?

Answer. We believe that a total operating budget of $1.2 billion will allow us to fully fund indirect costs. We are prepared to redistribute general fund appropriations and reimbursements between activities if warranted.

In the event of a shortfall, tribal contractors would be required to make priority judgments about the most appropriate use of all program funds. This would be done through contract negotiation with IHS.

Question. Will a supplemental be requested?

Answer. We do not plan to request a supplemental for this purpose in FY 1989.

Question. If not, do you plan to propose a reprogramming? What source of funds would be used?

Answer. We do not plan to propose a reprogramming for this purpose in FY 1989.

FUNDING REQUIREMENTS

Question. Dr. Rhoades, what inflation assumptions were used for the FY 1989 budget? For FY 1990?

Answer. For those programs considered direct medical care, the allowed inflation rate is 5.6 percent in the FY 1989 budget and 5.8 percent in FY 1990. The inflation rate for nonmedical is 3.5 percent in the FY 1989 budget and 3.6 percent in FY 1990.

Question. What has been the experience thus far in FY 1989 -- is inflation running at, below, or above your projections?

Answer. Based on the December 1988 Consumer Price Index, the inflation rate for medical health care costs will be 6.7 percent in FY 1989. In FY 1989, costs that have exceeded estimates include approximately $1.4 million for increased inflationary cost of medical supplies and equipment, approximately $4.4 million for health care purchased through contracts and grants, and $0.5 million for increased cost of scholarships.

Question. Have other noninflationary cost increases affected the delivery of services?

Answer. In FY 1989, the Indian Health Service is also absorbing approximately $13.4 million for the 4.1 percent general pay increase and $9.2 million for special pay allowance for physicians and nurses and other related pay costs.

Question. How do you plan to address this requirement?

Answer. The Indian Health Service will attempt to absorb these costs in a manner that will have the least detrimental effect on the delivery of health care services.

ALCOHOL/SUBSTANCE ABUSE

Question. In 1986, Congress enacted a comprehensive anti-drug bill. This act was amended last fall. The 1986 legislation, for which funds were provided in the FY 1987 appropriation act, authorized regional treatment centers for acute detoxification and rehabilitation for Indian youth.

Progress has been somewhat impeded in the Pacific Northwest due to a lack of agreement regarding the location of the facility. What is the present status of the planning for this facility?

Answer. Presently, the seven tribes of the Inland Tribal Consortium (ITC) are completing the development work necessary to establish a Regional Treatment Center (RTC) on an interim basis at the facilities of the Regency Care Services, Inc., Regency South Care Center, South 518 Brown Street, Spokane, Washington. It is expected that a contract for this facility should be awarded by mid-April 1989 pending approval of the building lease agreement and contractors budget justification.

Question. Has agreement been reached on a site?

Answer. The seven tribes of the ITC, with the support of other tribes, have decided to develop a treatment center for youth "east of the Cascade Mountains." Spokane, Washington, was found to be central to the tribes by air routes and roads and in mileage from the reservations which lie in the three States of Washington, Oregon, and Idaho.

Question. What structural work needs to be done for the facility?

Answer. At present, the ITC is requesting financial support for the planning and design of a freestanding RTC to be located in the Spokane, Washington area. The Congress has appropriated $600,000 for this purpose. In addition, the ITC is keeping its options open in light of the difficulty in locating the interim facility in this area and is considering acquiring an existing facility which needs renovation as determined by a professional architectural and engineering firm.

Question. When do you anticipate that it will be operational?

Answer. It is anticipated that the program will be operational in the interim facility (Regency Care Center) by June 30, 1989 (Portland Area Office, Executive Summary, March 20, 1989).

REGIONAL TREATMENT CENTERS

Question. I understand that facilities for the regional treatment centers in four other areas (Phoenix, Nashville, Navajo, and Alaska) are being renovated and will be operational in FY 1989. Each of these facilities will receive funding of $750,000 for operational needs, with Alaska receiving a cost adjustment. What level of funding and staffing is necessary to address fully the needs at these treatment centers?

Answer. The IHS is presently providing $750,000 per Regional Treatment Center (RTC) for approximately 70 percent of the need for salaries, expenses, and operating costs for 1990.

During a recent review of projected costs at the RTC in the IHS Albuquerque Area (Acoma-Canoncito-Laguna) and IHS Nashville Area (Cherokee), it was found that to adequately fund and operate a 24-bed, 30-staff facility, would require approximately $1,050,000. The total 1990 projection for eight RTC's and three IHS Areas that will be purchasing treatment services is as follows:

8 RTC's x $1,050,000	=	$ 8,400,000
3 Areas with Contract Care @ $750,000	=	2,250,000
TOTAL PROJECTION		$10,650,000
Funds available for RTC's	=	$ 7,500,000

The amounts and purposes involved are as follows:
(*an average from the Albuquerque and Nashville Area RTC's)

Staffing and related costs	$ 740,000
Operating costs	310,000
	$ 1,050,000

STAFFING FOR NEW/REPLACEMENT FACILITIES

Question. In FY 1990, funding is requested to provide staffing and operating costs for the Rosebud, South Dakota hospital ($3.5 million) and the Kyle, South Dakota health center ($1 million). In the request to the Department, however, IHS requested funding to allow for full operations at Sacaton, Arizona hospital ($1.2 million) and the Fort Thompson, South Dakota health center ($300 thousand). Additionally, IHS requested partial funding to address staffing and operation needs at facilities which will come on board during Fiscal Year 1990 -- Toppenish, Washington health center ($1.2 million) and Wolf Point, Montana health center ($700 thousand). The budget before the Committee, however, includes a request for funds to operate these facilities. What is the projected completion date for each of these facilities?

Answer. The Sacaton Hospital and Fort Thompson Health Center were completed in June 1988 and March 1988, respectively. Toppenish Health Center is scheduled for completion in July 1990 with an opening date in August 1990. Wolf Point Health Center is scheduled for completion in January 1990 with an opening date in February 1990.

Question. Funds provided previously allow for partial staffing and operation of Sacaton and Fort Thompson. On what grounds can you justify not fully staffing these new facilities?

Answer. The IHS process for requesting staffing for new/replacement health facilities is over a 2-year period. For the first year of operation of the facility, the IHS budget request is for 85 percent of the RRM staffing requirements. The remainder of the staffing requirements is requested in the following fiscal year budget request.

Question. What funds does IHS propose be used for operation of the facilities that will open in FY 1990?

Answer. Six facilities are scheduled to begin operation in FY 1990. Rosebud Hospital and Kyle Health Center have received partial funding from appropriations; and, additional funding is requested as annualization in the FY 1990 budget. The remaining four facilities: Sacaton, Arizona Hospital; Wolf Point, Montana Health Center; Fort Thompson, South Dakota Health Center; and Toppenish, Washington Health Center will be required to utilize existing funds if additional dollars are not provided.

Question. At what percentage will these facilities be staffed?

Answer. Based on the estimates reflected in the initial request, the following reflects the percentages at which each facility would be staffed:

Facility	Percentage
Rosebud, South Dakota Hospital	84
Sacaton, Arizona Hospital	85
Kyle, South Dakota Health Center	72
Wolf Point, Montana Health Center	28
Fort Thompson, South Dakota Health Center	84
Toppenish, Washington Health Center	39

Question. Dr. Rhoades, do you consider it to be prudent management to request $3.1 million for computer related services before requesting funds for the staffing and operating costs at new or replacement facilities?

Answer. Yes. The urgency of providing IHS-wide computer-support services and the resultant benefit to patient care outweighs deferring the request to future years.

INDIAN HEALTH MANPOWER

Question. The Health Professions Recruitment Program for Indians provides grants for recruiting Indians into health professions. At present, four universities receive funding from this program. Are there qualified students who have not received assistance due to funding constraints? How many?

Answer. The four universities who currently receive funding from this program concentrate in programs of student identification, recruitment, advocacy, training, retention, and eventual employment in various health professions. The culmination of such efforts is seen by the number of qualified students who have applied for the Indian Health Service scholarships available through the Health Professions Scholarship Program. In FY 1988, the IHS reviewed over 850 eligible applications from Indian students enrolled or accepted for enrollment in health professions schools; 88 new scholarship awards were made.

Question. For the different programs funded under the Health Manpower activity, please provide information regarding qualified applications received and funded for fiscal years 1987, 1988, and 1989?

Answer. The following tables will illustrate the number of qualified applications received by the IHS for the three scholarship programs conducted under the Health Manpower activity:

Qualified Applications Received

	1987	1988	1989
Health Preparatory [Sec. 103(b)(1)]	199	288	*
Health Pregraduate [Sec. 103(b)(2)]	130	103	*
Health Professions [Sec. 104]	558	482	*
TOTALS	887	873	*

Number Funded

	1987	1988	1989
Health Preparatory [Sec. 103(b)(1)]	73	12	*
Health Pregraduate [Sec. 103(b)(2)]	68	8	*
Health Professions [Sec. 104]	167	68	*
TOTALS	308	88	*

*The FY 1989 scholarship awards will be made in July and August, 1989. No figures are available at this time.

Question. Section 112 of the recently enacted Indian Health Care Amendments authorizes special nursing programs designed to confront the critical shortage of nurses who provide health care services for Indians. These programs may involve scholarship assistance, or grants can be provided to institutions who would design nursing programs specifically catered to needs in Indian Country. Dr. Rhoades, would such a program help address critical manpower needs?

Answer. Yes. The Indian Health Service funding for tuition grants and stipends should be sufficiently broad to create opportunities for the prospective nursing student whose education has been interrupted and the traditional student who cannot be supported by the 437 scholarship program.

Question. Did Indian Health Service request any funding for this program?

Answer. No. The bills were enacted after the budget request for FY 1990 was near completion.

Question. Has IHS discussed such a program with interested parties so that if funding were provided, valuable time would not be lost in development and administrative requirements?

Answer. The discussion of administrative requirements for Section 112 has begun both within IHS and with other PHS agencies with similar grant programs.

Question. The Bureau of Indian Affairs provides funding to Haskell Indian Junior College. In their budget (p. 46), BIA discusses a possible joint effort between Haskell and IHS to prepare nursing students for transfer to a four-year institution. What is the status of this venture?

Answer. As of this date, the IHS and BIA have not formalized a proposal for a joint effort between Haskell and IHS to prepare nursing students for transfer to a baccalaureate program. However, we understand that Haskell has begun discussion about ways to strengthen their prenursing program as well as ways to increase enrollment in preparatory courses for improvement in reading, mathematics, and science.

Question. Wouldn't this help to address some of the staffing shortfall?

Answer. This type of model program would facilitate educational mobility by assisting the individual to upgrade his or her formal education at minimal loss of time and money to the student and increase the number of Indian nurses available to work in the Indian Health program.

Question. Has IHS investigated the possibility of similar efforts with the tribally controlled community colleges?

Answer. Yes. Various initiatives have been developed to minimize nonfinancial barriers to nursing education for individuals desiring to enter the profession as well as for nurses wishing to upgrade their education. For example, Salish Kootena and Sisseton-Wahpeton Community College are establishing 2-year nursing programs which would link with a 4-year program. Oglala is working toward a formalized linkage with South Dakota State University. Currently, Turtle Mountain Community College and University of Mary are collaborating to provide a BSN to a significant percentage of the LPN's at the PHS Indian Hospital, Belcourt, North Dakota, and surrounding community. Cheyenne River has a longstanding linkage with Presentation College in Aberdeen, which is implementing a 4-year program in addition to the 2-year program. Navajo Community College has a prenursing program and there is a strong liaison with Northern Arizona University.

ALASKA COMMUNITY HEALTH AIDE PROGRAM

Question. The "Statement of the Managers" accompanying the Conference Report on the FY 1989 Interior and Related Agencies appropriation bill included language directing that IHS submit a report addressing the current status of the Alaska Community Health Aide Program (CHAP). The report was due February 1, 1989. The Committee has not yet received the report. I understand, however, that the Alaska Area Native Health Service submitted the report to headquarters on December 15, 1988. Can you explain to the Committee where the report is and when we can expect to receive it?

Answer. The CHAP report is currently being finalized and will be submitted to the Committee shortly.

Question. What explains the delay in review at headquarters?

Answer. The Alaska Community Health Aide Program report has been reformatted, making it a more useful resource document for Committee staff. We expect to transmit the report shortly.

Question. Are there going to be substantive changes to the draft, which essentially endorsed the report prepared last spring by the Alaska Native Health Board?

Answer. No, there will not be substantive changes to the draft.

Question. In addition to requesting the report, Congress provided increases of $5 million for the CHAP program and $1.239 for the Alaska village-built clinic program in FY 1989. Have these funds been distributed yet?

Answer. Yes, these funds have been distributed.

Question. What accounts for the delay?

Answer. As stated earlier, the need for adjusting the accounting system, the additional data needed from the Areas, and apportionment deliberations account for the delay.

Question. On page 81 of the justification, only the increase for CHAP is reflected. What has happened to the village-built clinic funding?

Answer. The following is a revised page 81 which reflects the increased funding for the village-built clinics.

Types of Programs
(Dollars in Millions)

Hospitals and Health Clinics	ACTUAL FY 1988	PROJECTED FY 1989	PROJECTED FY 1990
Program Support 1/	$ 58.7	$ 63.8	$ 67.3
Substance Abuse	16.2	17.6	17.8
Emergency Medical Services	6.5	6.8	7.3
Maternal and Child Health Services	20.3	20.7	21.1
Model Diabetes Services	3.9	4.1	4.3
Alaska Native Community Health Aides and Village Built Clinics	6.8	11.8	12.1
Continuing Medical Education	1.4	1.5	1.6
Research and Evaluation	1.2	1.3	1.3
Laundry, Linen, and Housekeeping	13.7	16.1	17.9
Facilities and Grounds Maintenance	38.1	41.3	43.7
Recruitment and Retention	5.0	5.0	5.0
Dietary and Nutrition	14.9	16.8	18.1
Medical Supplies	43.2	45.8	48.5
Resources Patient Management System (RPMS)	2.5	2.5	2.5
General Clinical Care 2/	301.2	325.4	343.4
Total	$533.6	$580.5	$611.9

This table displays representative programs funded under Hospitals and Clinics. This cross-sectional display provides examples of the medical services and other types of services required to operate Hospitals and Clinics funded under this account.

1/ Excludes operational cost of Headquarters and Area Offices.

2/ This includes acute, chronic, rehabilitative, and preventive services provided both in hospital and ambulatory clinic settings. Examples of this comprehensive care include general medical, obstetric, surgical, optometric, laboratory and X-ray, pharmacy, and social service.

SANITATION FACILITIES

Question. The budget (p. 67) indicates that 80 percent of Indian homes have safe water. This leaves 20 percent without safe water. What is the extent of the backlog — both in terms of homes to be served and dollars required? Please provide detail by Area.

Answer.

IHS Area	Number of Homes Requiring Services						Total Cost
	Water		Sewer		Solid Waste		
	1st Svc*	Upgrade**	1st Svc*	Upgrade**	1st Svc*	Upgrade**	
Aberdeen	693	12629	735	6534		11750	$ 78,182,500
Albuquerque	50	15598	59	4228	2787	1581	15,731,000
Anchorage	1361	7272	1794	6279	1956	5477	145,802,000
Bemidji	131	2720	129	1721	360	2310	13,892,000
Billings	201	6628	115	2992	1068		13,693,000
California	913	3588	695	229	2518	170	18,963,000
Nashville	2367	7312	992	1009	168		43,721,000
Navajo	10766	2689	10801	80	17387	1500	173,231,000
Oklahoma City	3889	12980	4109	10842	3911	1075	68,344,200
Phoenix	1939	17446	3350	8398	7100	3107	53,252,400
Portland	308	5152	246	2978	3097	2650	23,842,000
Tucson	340	4239	1043	648	3251	493	26,412,000
TOTAL	22,958	98,253	24,068	45,938	43,603	30,113	$675,066,100

* The Indian Health Service has not served these homes.

** Partial facilities have been provided but need upgrading for various reasons including new regulatory requirements, additional homes added to existing systems without making necessary capital improvements to increase system capacities, and inadequate routine maintenance.

Question. Does IHS have a priority system for addressing these needs?

Answer. Yes. A priority system is used to identify the most critical needs for sanitation facilities. It considers the level of deficiency in each community, public health conditions, and relative costs.

Question. How are these priorities determined?

Answer. Priority lists are developed by each of the 12 IHS Areas in consultation with the affected tribes. Consideration is given to placing each project in one of the five levels of deficiency listed below:

V. Community lacks safe water supply and sewage disposal facilities.

IV. Community lacks safe water supply or sewerage disposal facilities.

III. Community water supply and sewerage facilities are inadequate; i.e., they do not comply with appropriate regulations; or the community has no solid waste disposal facilities; or the community has a need to establish or improve an operation and maintenance organization.

II. Community has facilities which comply with applicable regulations but facilities are deficient; i.e., the water storage tank is too small or well capacity is inadequate.

I. The community facilities comply with applicable regulations and services are provided to all qualified Indian homes. A minimum level of technical assistance is required from the IHS.

In addition to establishing these deficiency levels, the IHS Areas consider the economic and technical feasibility of each project when developing their priority lists.

Headquarters distributes funds to the Areas based on a formula. The formula includes the following factors:

(a) The relative amount required to correct critical deficiencies (III-V above) in dollars;

(b) The relative public health conditions in the community as reflected by comparisons of reported outpatient visits and hospital discharges; and

(c) The relative cost per home to provide sanitation facilities with cost adjustments based on the Construction Cost Index for each Area.

Question. What constraints, other than dollars, prevent IHS from providing all of these homes with safe water?

Answer. There are no constraints other than financial resources that prevent IHS from serving these homes.

Question. Isn't safe water essential to the health of children, in particular?

Answer. Yes, children, even more than adults, may be affected adversely by ingestion of unsafe water. One malady which is associated with water that does not meet bacteriological standards is diarrhea. If untreated, diarrhea may lead to severe dehydration, a life-threatening condition in very young children. As safe water supplies have been provided in Indian communities, a parallel decrease in neonatal infant mortality has occurred. Several other diseases or conditions are associated with unsafe water, and with many of these the effects in children are frequently more severe and life-threatening than in adults. An example of this would be high nitrates in drinking water which may cause a short-term blood condition known as methemoglobinemia in young babies.

Question. If children grow up in unhealthy conditions, aren't they more likely to develop illness and disease?

Answer. Yes, unhealthy conditions, by definition, lead to increased morbidity. Very young children are more susceptible to environmentally related diseases because they lack immunity to common pathogens which may be more prevalent in an unhealthy environment. Also, children generally do not have an understanding of or appreciation for good personal hygiene which is so necessary to prevent disease.

Question. Then, simply on a cold, economic basis, doesn't it make sense to address these facilities problems now?

Answer. Many projects can be justified on an economic basis. However, the list of sanitation facilities needed to serve American Indians and Alaska Natives has not been restricted to those that can be justified economically. Language in the most recent Indian Health Care Improvement Act Amendments (P.L. 100-713, Title III, Sec. 302g) requires that IHS report all projects required to provide full service to all Indian and Alaska Native homes.

Question. Why then, given the backlog and ability to provide the necessary sanitation facilities, has no funding been requested for this purpose in the FY 1990 budget?

Answer. The commitment to reducing the Federal budget deficit requires decisions to be made between varying priorities. The IHS will continue to provide sanitation facilities for new homes with funds provided by the Department of Housing and Urban Development (DHUD). Approximately $22 million from DHUD is expected to be made available during FY 1990 for sanitation facilities for 2,200 DHUD financed homes.

Question. In the nonfacilities side of the sanitation budget, environmental health activities including infection control, safety, and occupational health provide protection for patients, visitors, and staff at health care facilities. The budget (p.111) indicates, however, that such services are also provided to students and clients of other institutions. What are these other institutions? Please provide specific examples.

Answer. Other institutions include BIA day schools and boarding schools, tribal schools, headstart schools, day care centers, tribal jails, tribal nursing homes, detention centers and halfway houses, drug rehabilitation centers, etc.

Question. Is this an appropriate role for the Indian Health Service?

Answer. Yes. These facilities are located on or near Indian reservations and predominantly serve Indian people. The IHS has an obligation to ensure that a safe and healthy environment is maintained in these facilities. In addition, the IHS, under a Memorandum of Understanding with the BIA, provides environmental health surveillance for their facilities.

Question. Is IHS reimbursed for such services rendered at non-Indian institutions?

Answer. The services listed above are provided at tribal and other Federal facilities for the benefit of Indians and Alaska Natives; therefore, no reimbursement is received. The IHS does not routinely provide institutional environmental health services (less than 1 percent of the annual total) for facilities utilized primarily by non-Indians.

Question. How much was spent on these activities in FY 1988 and estimated for FY 1989?

Answer. If this question is meant to identify how much was spent to provide services to facilities serving predominantly non-Indians, the answer would be "essentially none."

Question. Aside from the tremendous backlog of safe water facilities, Indian country is confronted also by a large solid waste problem. Please describe more fully the nature and magnitude of this problem and steps IHS and other agencies are taking to address it.

Answer. There are significant facilities and equipment deficiencies in the solid waste disposal programs in many Indian communities just as there are in many, if not most, non-Indian communities. Approximately $37 million is needed to correct the backlog of solid waste disposal deficiencies for Indian homes and communities.

The nature of the problem is best described as being similar to the problem existing in most other sparsely populated rural areas. Low population densities and large distances between homes and disposal sites on Indian reservations makes solid waste disposal equipment and facilities expensive to operate. There is great concern for protecting the environment (e.g., preventing the contamination of ground water, etc.); however, issues such as regulation, enforcement, and funding the operational costs of solid waste facilities must be confronted locally. Because this is so large a problem in Indian country, IHS and the Environmental Protection Agency (EPA) have encouraged tribes to consider affiliations with nonreservation entities when regional solid waste facilities are being planned or are available.

Among the activities that are being pursued by various agencies are:

- Quarterly meetings between EPA, IHS, the DHUD and the BIA for the purpose of coordinating activities on Indian lands. A major topic at these meetings has been the solid waste issue. As a result of such discussions, DHUD has recently revised its policy and now permits the funding of solid waste facilities in conjunction with new DHUD housing projects.

- The IHS has long provided limited funds to Tribes for solid waste projects. In addition, IHS works closely with the Tribes to encourage them to apply for funds from the DHUD Community Development Block Grant (CDBG) program for solid waste projects.

- The EPA is providing $175,000 to six tribes for the preparation of solid waste management plans.

Question. What funding is included in the FY 1990 budget for solid waste treatment?

Answer. No funds are requested for this purpose in FY 1990.

Question. How do you propose to deal with this problem in the outyears?

Answer. Most reservations do not have a long-term plan in place to address their solid waste problems.

Presently this problem is being addressed on a case-by-case basis. Available funds are used to address those situations where the problem is deemed significant from the public health standpoint and the tribes have decided that correction of solid waste deficiencies is a high priority. The effectiveness of this approach is largely dependent upon the tribes' willingness to enforce regulations and provide financial support to the solid waste program. The difficulty in resolving the solid waste disposal problems in many Indian villages is directly related to an inadequate economic base to fully support the required infrastructure.

FACILITIES

Question. The IHS is presently reviewing the methodology used for determining construction priorities. Please describe for the Committee the review process being used by IHS?

Answer. The current application of the Health Facilities Construction Priority System has been delayed so that the Priority Committee can review the existing methodology. The Priority Committee will consider those concerns most commonly expressed by the Area Offices, such as, weights given to the age of the existing facility, isolation, and available alternate resources. We expect this process to be completed by July 1989.

Question. What impact will this review have on the existing priority list, particularly with respect to projects planned but not yet under construction?

Answer. The ongoing review will have no impact on the current priority list. It is IHS policy that once a project is placed on the priority list it will remain there unless some compelling reason, such as an unexpected workload decrease (e.g., shifting population because a uranium mine has closed), necessitates its removal.

Question. What is the time frame IHS has for completing this review and preparing a new list?

Answer. The IHS will complete the application of the Priority System Methodology and have a new priority list available by March 1, 1990.

Question. For the record, please provide a copy of the current facilities priority list.

Answer. Following is the most current IHS Priority List for inpatient care facilities, ambulatory care facilities, and staff quarters:

PRESENT FACILITIES PRIORITY RANKINGS

MARCH 1988 1/				MARCH 1987	
	INPATIENT CARE FACILITIES		AMBULATORY CARE FACILITIES		PERSONNEL QUARTERS
1	Anchorage, AK *	1	Parker OPD, AZ *	1	Kotzebue, AK (50) *
2	Wagner, SD * 2/	2	Sallisaw, OK *	2	Pine Ridge, SD (84) *
3	Pine Ridge, SD *	3	Belcourt OPD, ND *	3	Barrow, AK (29) *
4	Kotzebue, AK *	4	Puyallup, WA *	4	Belcourt, ND (28)
5	Shiprock, NM *	5	Taos, NM *		
6	Ft. Belknap, MT * 3/	6	Tohatchi, NM *		
7	Ft. Defiance, AZ *	7	Ft. Yuma, AZ *		
8	Crow Agency, MT *	8	Second Mesa, AZ 5/		
9	Winnebago, NB 4/	9	Pinon, AZ 4/		
10	Phoenix, AZ 4/	10	White Earth, MN		
		11	Montezuma Creek, UT		
		12	Stilwell, OK		

* Partially Funded

1/ A list of additional facilities is being evaluated and ranked to select locations to be added to the priority list and will be available 3/90.

2/ Proposed to be changed to Ambulatory Health Care Facility.

3/ Proposed to be changed to Ambulatory Health Care Facilities at Hays and Fort Belknap.

4/ In FY 1989, funds were appropriated for planning study.

5/ On hold at Tribe's request.

Question. How much of the $61.7 million in new funds provided in FY 1989 do you plan to obligate in FY 1989? Provide a breakdown, by project, with anticipated date of obligation, for the record.

Answer. The IHS expects to obligate $53.8 million of the $61.7 million appropriated for facilities in FY 1989. Following is a breakdown of FY 1989 funds to be obligated in FY 1989:

Project	FY 1989 Appropriated Funds	Estimated Amount To Be Obligated	Estimated Quarter Funds To Be Obligated
New Construction:			
Anchorage, AK	$ 2,500,000	$ 2,000,000	4th Quarter
Wagner, SD	4,227,000	0	
Fort Belknap, MT	298,000	298,000	3rd Quarter
Fort Hall, ID	5,474,000	5,474,000	3rd Quarter
Taos, NM	50,000	50,000	3rd Quarter
Tohatchi, NM	581,000	352,000	4th Quarter
Fort Yuma, AZ	667,000	0	
Winnebago, NB	50,000	50,000	3rd Quarter
Phoenix, AZ	150,000	150,000	3rd Quarter
Pinon, AZ	50,000	50,000	3rd Quarter
Browning, MT	314,000	314,000	3rd Quarter
	14,361,000	8,738,000	
Repair & Improvement:			
Design Fund	350,000	350,000	4th Quarter
Mt. Edgecumbe, AK	2,200,000	0	
Gallup, NM	780,000	780,000	3rd Quarter
Talihina, OK	644,000	644,000	4th Quarter
Albuquerque, NM	830,000	830,000	3rd Quarter
Portland, OR	503,000	503,000	4th Quarter
	5,307,000	3,107,000	
Sanitation Facilities:	42,000,000	42,000,000	By quarters apportionment
Total Facilities	$61,668,000	$53,845,000	

WARM SPRINGS HEALTH CLINIC

Question. The Warm Springs Tribe of Oregon has informed the Committee of its interest in working with the IHS to solve the clinical needs of the tribe. The present clinic is, I am told, old and too small to renovate. The tribe is proposing to build a new structure, in return for which IHS would provide staffing and acquire equipment. Has IHS discussed this proposal with the tribe? What is your preliminary response?

Answer. Yes. Representatives of the Warm Springs Tribe have met and discussed their proposal with IHS staff but no formal, written proposal has been submitted to the IHS. The Tribe has indicated a willingness to provide the proposed new facility to the IHS without a lease or rental fee for many years if the IHS will provide additional funding for staff and equipment and will negotiate a fee for a lease at a later date. The IHS is impressed with the initiative demonstrated by the Warm Springs Tribe in trying to find a viable solution to their facility and service delivery needs. The IHS' preliminary response is that the we cannot lease a new facility, purchase equipment, or provide additional staffing without congressional authority.

Question. .What cost comparisons can you provide regarding current funding for the Warm Springs clinic vis-a-vis the costs associated with the proposal?

Answer. Because no written proposal has been submitted, the IHS is unable to provide a cost comparison of current facility funding versus future costs of the facility the tribe proposes to construct.

Question. Would this project be subject to the facility priority list since IHS is not providing the construction funds?

Answer. Yes. The IHS cannot lease a new facility, purchase equipment for it, or provide additional staffing without congressional authority. The authority is usually provided to the IHS by the Committee through the mechanism of the facility priority list. The Service Unit Resources Allocation Methodology (SURAM) will provide additional financial resources to the Service Unit in the future to the extent the IHS allocates resources to the National Equity Fund. If the Tribe built a new facility as proposed, the IHS does not have another applicable methodology to authorize additional staff, provide equipment, or lease a new facility; therefore, the proposed new facility would have to compete on the facilities priority list unless a special demonstration or pilot project is approved. The tribal proposal appears to be advantageous to the Government and may deserve special consideration for the development of this type of project; i.e., new, tribally built health facilities.

Question. Are other alternatives to Federal funds for facilities being pursued by IHS? Please provide details.

Answer. Public Law (P.L.) 100-202, The Continuing Appropriations Act for Fiscal Year (FY) 1988, directed the IHS, in part, to compare the advantages and disadvantages to the Government of lease-purchase versus direct Federal construction. In its report, the IHS discusses, in general terms, the advantages and disadvantages of direct Federal construction and three types of lease-purchase arrangements: lease-purchase with alternative financing; build-to-buy; and public-private partnership. Each alternative requires an indepth cost analysis. The IHS anticipates having a cost analysis for at least one proposed facility completed by November 1989.

Several Tribes have expressed an interest in constructing facilities, using non-IHS resources, on Federal trust land and then leasing them to the IHS.

ACCREDITATION

Question. Currently, 46 of the 50 hospitals operated by the Indian Health Service and the tribes are accredited by the Joint Commission on Accreditation of Healthcare Organizations. Additionally, 44 IHS health centers are accredited. How many health centers are not accredited?

Answer. Currently, only 13 health centers eligible for Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation are not accredited. This reflects 23 percent accreditation of IHS Health Centers eligible for accreditation.

Question. What steps are necessary to get the remaining hospitals and health centers accredited?

Answer. All hospitals, except one, have been accredited or have applied for survey by the JCAHO. The low patient utilization and staffing problems at Owyhee makes it doubtful that it will ever attain accreditation. All 13 health centers eligible for accreditation have or will be applying for a JCAHO survey.

Question. What is the cost estimate associated with completing the accreditation process for the remaining units?

Answer. All hospitals except one have been or have applied for a survey by the JCAHO. There will, therefore, be no additional survey cost for them.

The survey cost for the remaining 13 health centers eligible for JCAHO surveys will be at least $3,250 per survey, or $42,250. This is an ongoing cost which averages $1,084 per year per facility. Each facility will be accredited for a period of 3 years. These costs are for the survey itself and do not address preparation for the survey or correction of the deficiencies cited.

On an annual basis the IHS spends about $100,000 on actual accreditation surveys.

Question. Does the lack of accreditation hinder a unit's ability to compete for other Federal, or non-Federal funds?

Answer. Yes, but only when accreditation is needed to obtain these funds.

Under sections 1880 and 1911 of the Social Security Act, IHS hospitals must be JCAHO-accredited or Health Care Financing

Administration-certified in order to obtain Medicare and Medicaid funds. Accreditation/certification may be required by specific grantee programs. We are not aware of any other specific requirements at this time.

URBAN HEALTH PROJECTS

Question. The budget request includes $10.2 million for urban health programs. The justification (p. 53) indicates that $8.1 million is provided for partial funding of 35 urban health organizations. For what purpose is the remaining $2.1 million proposed?

Answer. The budget request includes $10.2 million for urban health programs. However, the justification (p. 53) should read that $8.8 million is provided for partial funding of 35 urban health organizations instead of $8.1 million. Therefore, $1.4 million is remaining instead of $2.1 million. The IHS is proposing the remaining $1.4 million is to maintain a continuity of supporting (1) tribal administrative costs which may include: salaries and wages, materials and supplies, purchase of services, expensive malpractice insurance, security, maintenance and grounds, procurement and property, and many other general administrative support items; (2) technical assistance and capacity-building activities to strengthen the urban programs administration, management, fiscal, medical and dental, community services, outreach, and referral services; (3) special research projects, work groups, workshops and conferences identified by IHS and the urban programs; (4) to meet unexpected special urban program needs such as increase in malpractice insurance, etc.; and (5) mandatory cost-of-living increases.

Question. What level of funding is necessary to provide full, rather than partial, funding of the urban health groups?

Answer. In FY 1988, Urban Programs received IHS Title V funding in the amount of $10.2 million and received approximately $18.4 million from other resources such as Federal, state, county, city, third-party patient collections, foundations, etc. Full resources available to the Urban Programs now are approximately $28,600,000 based upon FY 88 levels of service.

Question. Please provide, for the record, detail regarding the distribution of funding among the different health organizations. Include, by unit, the estimated level for full funding to address unmet need.

Answer. The Indian Health Service (IHS) Headquarters office has the overall administration and monitoring responsibilities of distributing Public Law (P.L.) 100-713, Title V funding appropriated by Congress. The IHS Headquarters distributes Title V funds to IHS Area Offices. The IHS Area Offices have the responsibilities to identify unmet health needs and award contracts through competitive procurement procedures to urban Indian organizations that meet legislative requirements to provide health services.

The IHS Headquarters office also maintains reserve Title V funds to maintain: (1) tribal administrative costs which may include:

salaries and wages, materials and supplies, purchase of services, unforeseen increase in malpractice insurance, security, maintenance and grounds, procurement and property, and other general administrative support items; (2) technical assistance and training activities to strengthen the urban programs administration, management, fiscal, medical, dental, community services, and outreach and referral services; (3) special research, reports, workshops, and conferences identified by IHS and the urban programs; (4) to meet some unexpected administrative costs such as an increase in malpractice insurance during the year, etc.; and (5) providing mandatory cost-of-living increases.

IHS at this time cannot accurately estimate the urban programs unmet needs until a new or revised comprehensive urban program national review is conducted.

Question. Additional information provided in the budget indicates that two of the 35 urban health programs are funded from the Hospitals and Health Clinics activity. Which two are these?

Answer. Oklahoma City Indian Clinic, Oklahoma City, Oklahoma, and the Indian Health Care Resource Center, Tulsa, Oklahoma.

Question. Why are they funded separately?

Answer. During the 99th Congress 2nd session the Department of the Interior and Related Agencies Appropriation Bill, 1987 stated:

> Hospitals and Clinics within the amount provided, the Committee has transferred $1,000,000 from the Urban Health Program for a demonstration project to integrate the Oklahoma City and Tulsa projects with the IHS Hospital and Clinics Direct Care Program.

The Fiscal Year 1988 and Fiscal Year 1989 Appropriation Bills continue to include these projects with IHS Hospital and Clinics Direct Care programs. Congress did not specify in appropriation language the goals of the demonstration projects nor set specific dates of the length of the demonstration projects.

Question. In the program output data for the urban health programs, a decline in services provided is forecast from FY 1988 to FY 1989. Is this decline due to only partial funding for the program?

Answer. The decline in services and workload shifts of urban programs are caused by the following factors: 1) Increasing costs of malpractice insurance; 2) increasing costs of recruitment and retention of physicians, dentists, and other health professionals; 3) decreasing state and county funding and harder-to-qualify for city and private foundation funding resources; 4) transferral of two urban programs into the IHS Hospital and Clinics Direct Care Program Activity; 5) medical care inflation is approximately 10 to 12 percent annually and associated with increase of the Medical Care Consumer Price Index; 6) medical inpatient care is 7 percent higher annually; and 7) continuation of congressional appropriation levels being lower than authorization levels.

Question. If not, to what do you attribute the decline?

Answer. The decline in services is also related to steady increases in administration and health care costs, and funding levels of urban programs have not kept up with the inflationary medical care costs.

PUBLIC HEALTH NURSING

Question. I understand that 35 percent of public health nursing programs are operated by the tribes (p. 59). Yet, in providing the breakout of public health nursing to the tribally and Federally administered appropriation accounts, the tribal portion received only 20 percent of the funds. Dr. Rhoades, doesn't this division underfund the tribal program before the fiscal year ever begins?

Answer. Public health nursing (PHN) activity funds do not meet the needs for the field activities. In general, tribes have received proportionately a greater percentage of funding from PHN activity than the Federal segment.

Question. How do you justify this funding level for the tribal program?

Answer. Tribal programs which have been contracted receive comparable funding to that expended by IHS when directly operated. The tribes receive the same percentage of increase as direct programs.

Question. How can the Committee have any confidence in the IHS dedication to self-determination when we are presented with budgets like this?

Answer. IHS is dedicated to self-determination. Tribal Public Health Nursing (PHN) programs are funded to the extent that they have requested both from PHN activity and the comprehensive health program.

Question. With respect to public health nursing, IHS indicates (p. 117) that ". . . participation of tribes or tribal organizations in self-determination activities is dependent and determined by the initiative of individual tribes." That seems to be a pretty "laissez faire" attitude, wouldn't you agree?

Answer. No. P.L. 93-638, the Indian Self-Determination and Education Assistance Act, requires that participation by tribes or tribal organizations in self-determination activities is voluntary and initiated by tribes. Thus, a decision not to take over a program also constitutes an act of self-determination. It would be an infringement on tribal sovereignty if the IHS were to exert any coercive action in either direction.

Question. What can and is IHS doing to encourage and help tribes assume management of their health programs?

Answer. The IHS actively collaborates with tribal governments to plan, develop, and implement additional P.L. 93-638 health delivery systems, improve existing systems, and increase tribal awareness and understanding of the self-determination process. In the 13 years since the passage of P.L. 93-638, there has been substantial growth in the number and types of activities operated by Indian tribes and tribal organizations. At present, tribes operate 52 service units, 7 hospitals, 73 health centers, 2 school health centers, and 262 smaller health stations and satellite clinics.

HEALTH EDUCATION

Question. The goal of the health education program is to assist the Indian people to adopt health-promoting lifestyles. Increasingly, tribes have been contracting to operate these programs. For FY 1989, IHS projects that additional contracts will increase tribal operation to over $2 million. Are these contracts assumed to continue for FY 1990?

Answer. Yes, these contracts will continue to be funded in FY 1990.

Question. Why then is only $1.1 million provided in the request for tribal health education programs (p. 61)?

Answer. When the fiscal year projections were made in early 1988, funds for the Navajo Tribal P.L. 93-638 Health Education contract had not been allocated. In FY 1989, $831,805 was allocated to the Navajo Tribe. Thus, the total funding for Tribal Health Education Programs for FY 1989 is $2,008,104. The budget document was in press and the actual tribal requirement should be substituted for the figure on page 61.

Question. What happens to the difference? Are all tribes underfunded by a like percentage?

Answer. As indicated in question number 87 the correct figure for Tribal Health Education funding is $2,008,104. Therefore, there should be no difference in the requested funding level.

TRIBAL MANAGEMENT

Question. The budget proposes a transfer of $719,000 from Tribal Management to Direct Operations. The intent of this transfer as I understand it, is to display entirely, within the Direct Operations activity, those costs associated with management and administration of IHS and tribal programs. Please provide, for the record, a breakout of the funding and staffing for the different programmatic functions conducted within the Tribal Management activity for fiscal years 1986, 1987, 1988, and estimated for 1989 and 1990?

Answer. The FY 1990 Budget proposes a reduction of $624,000 from the tribal management activity and an increase of $719,000 to direct operations (the difference of $95,000 is for inflationary adjustments). These are recurring funds that were specifically budgeted in the past for the purpose of supporting positions in IHS that provide limited training and technical assistance to tribes that desire to exercise self-determination opportunities. These positions are more appropriately supported under the direct operations category. The breakout of the subject funding and staffing is as follows:

TRIBAL MANAGEMENT:

	1986	1987	1988	1989	1990
PROGRAM	$1,968,000	$2,000,000	$2,366,000	$2,476,000	$2,594,000
STAFFING	-0-	709,000	728,000	742,000	-0-*
TOTAL	$1,968,000	$2,709,000	$3,094,000	$3,218,000	$2,594,000
FTE's	16	16	14	16	0

*FTE's and resources proposed transfer to Direct Operations.

Question. The FY 1989 House report requested that IHS provide, by February 1, 1989, a report on the costs and rationale for the positions included in the Tribal Management program. The budget indicated that this report would be submitted by the stated due date, but it has not been received. Dr. Rhoades, when can the Committee expect to see the report?

Answer. This report has been completed and is being finalized and will soon undergo clearance within the PHS and DHHS. The report will be forwarded to the Committee in the near future.

Question. Why have we not received the report? There seems to be a pattern of disregard for the deadlines established by the Committees -- please comment.

Answer. IHS staff are making every effort to expeditiously prepare the reports requested by the Committees. In FY 1989, the number of reports and/or significant items requiring responses has increased by six reports, or 43 percent more than requested the previous year. We will transmit all reports to the Committees in as timely a manner as possible.

The Tribal Management report has been completed and is being finalized and will soon undergo clearance within the PHS and DHHS. The report will be forwarded to the Committee very soon.

NEW TRIBES

Question. What is the growth in service population due to newly recognized tribes? Provide a breakdown, by tribe and source of funds.

Answer. In FY 1989, the IHS service population increased by 0.2 percent due to three newly recognized tribes. A breakdown by tribe and source of funds is as follows:

Tribe	FY 1989 Population	Source of Funds
Alabama and Coushatta Tribes of Texas	1,570	Hospital and Health Clinics

Tribe	FY 1989 Population	Source of Funds
Ysletta Del Sur Pueblo of Texas	806	Hospital and Health Clinics
Gay Head Wampanoag Indians of Massachusetts	173	Hospital and Health Clinics

Question. Is additional funding necessary to bring the newly recognized tribes to the national average? If so, how much?

Answer. The FY 1989 appropriation provided resources to fund the newly recognized tribes at the IHS average of 74 percent Level of Need Funded (LNF). The IHS is not aware of the recognition of any new tribes scheduled for FY 1990.

DENTAL SERVICES

Question. In FY 1988 dental program reviews were conducted in Alaska, the Aberdeen Area, and the Phoenix Area. Briefly summarize the findings of these reviews, particularly with respect to Phoenix.

Answer. Brief summary of each area follows:

The Alaska Area is a diverse program largely operated by Native Corporations under contract with the IHS. There is an excellent working relationship between the IHS Area dental officer and the contract programs with an active and well-accepted quality assurance program, as well as corporation support for dental services.

The need for more aggressive pursuit of third-party reimbursements by some programs was noted. However, there still existed a reluctance on the part of some insurance companies to reimburse 638 programs for services provided.

The Aberdeen Area dental program has responsibility for programs in North and South Dakota as well as Nebraska and Iowa. A number of remote and culturally isolated sites with extreme climatic conditions exist in the Area. Many of these sites are served by antiquated and deteriorated mobile dental units. As a result, the Area has difficulty recruiting and retaining experienced dental professionals. The review noted a marked increase in productivity of FY 87 over previous years and a continued improvement in disease prevention/health promotion components of the dental program. These improvements appeared to be directly related to the efforts of the Area Dental Officer and the Area Dental Prevention Officer. The Area was encouraged to maintain support of these technical assistance positions.

The Phoenix Area has a wide geographic service area with programs in Arizona, California, Nevada, and Utah. Most of the IHS-managed programs are located in Arizona while many of the tribally managed programs are in Nevada. Increased efforts have been made to provide technical assistance to tribal programs but are limited by staff constraints. A number of facilities were not fully staffed.

Phoenix is one of the few IHS Areas that does not have the resources to coordinate dental disease prevention activities on an Area-wide basis. In recent years, the Phoenix program has not received sufficient program increases to even meet the increased costs associated with implementation of infection control requirements nor mandatory pay increases. In order to establish an Area-wide dental disease prevention activity at this time would require a decrease in clinical care.

Question. Were deficiencies found?

Answer. Alaska Area: Yes, for several reasons Alaska is able to only partially meet its dental needs. The remoteness of many villages and the severe weather conditions permit only sporadic dental care of short direction be provided to many Alaskan patients. During these short periods, as many people as possible seek dental services. However, on many occasions only their most basic needs can be met. In 1988, 40 percent of the population accessed care; but, only 55 percent of their needs could be met.

Aberdeen Area: In spite of the gains noted, the Area has a huge need for resources since the program currently provides access to only 29 percent of its active users.

Phoenix Area: The Phoenix dental program has resources to treat only 26 percent of its active user population annually.

Question. How does the IHS plan to address these needs?

Answer. The dental program has prioritized specific needs in each Area. As resources are made available, they will be distributed according to these priorities based upon RRM unmet needs assessment and RAM, which also includes performance measures.

Question. The budget references a large backlog of restorative needs of adults (p. 88). What is the cost estimate to address this backlog?

Answer. The backlog of restorative needs among adults is calculated to be $50 million annually. This estimate is based upon data collected in a comprehensive survey of oral health status and treatment needs conducted in 1983-84. Assuming a stable level of treatment needs, analysis of FY 88 workload reveals that only 65 percent of the treatment needed by those who received any dental care was provided. This estimate assumes that some services could be deferred and be provided gradually, over the course of 7 years, to spread out program costs. Provision of such deferred services at that rate would cost $17 million per year each year.

Fiscal year 87 workload data indicates that for the 25- to 34-year-old age group, the adult group with best access to care, only 42 percent of required services were provided, and these were only the most basic of services. A lower proportion of service needs, as measured by resources required, was actually provided. For other adult age groups, the proportion of services provided was much lower. Only half of those whom the IHS expects would seek care, if it were available, actually gain access (30 percent IHS utilization versus 57 percent national utilization). It is estimated that an additional $33 million is required to meet annual dental care needs of the approximately 150,000 adults who would have sought care if it had been made available.

These per capita treatment need estimates are based upon the 1983-84 survey and FY 88 unit costs. Since such surveys and patient-by-patient documentation of deferred services requires significant dental team time and because the dental deficiencies are so great, the dental program uses the epidemiologic method to provide estimates of the cost to provide deferred services and unmet need rather than annually reporting specific cases deferred of each treatment type and the cost of each service.

Question. Has the backlog increased or decreased in recent years?

Answer. In recent years the backlog of restorative needs of adults has increased. Although Congressional appropriations for unmet need and preventive efforts have had positive effects, the dental program has not had sufficient resources to treat all of the incidence of new disease which develops each year. Untreated incidence adds to the backlog of treatment needs.

STAFFING

Question. Within the total level of staffing requested, the Indian Health Service has proposed a reduction of 343 full-time equivalent employees. What specific program proposals do you associate these FTE reductions with?

Answer. Since reductions in FTE's would be associated with expansion of tribally operated programs or new takeovers by tribal governments, the number of program staff is not really reduced, only the consumption of, or measurement by, FTE's is changed.

Question. How do you reconcile this reduction in FTE's with language contained in Title III (Section 310) of the General Provisions of the FY 1989 Interior and Related Agencies appropriations act?

Answer. As the IHS contracts more and more of its programs to Tribes and Tribal organizations, the logical outcome will be a shift from Federal staff to Tribal staff with a commensurate reduction in Federal FTE's.

Question. Please provide, for the record, actual FTE usage, by activity, for FY 1987, FY 1988 and projected FY 1989 usage.

Answer. Actual and projected FTE usage follows:

	Actual FY 1987	Actual FY 1988	Projected FY 1989 2/
Hospitals & Clinics	8,144	8,308	8,647
Dental	630	653	720
Mental Health	202	196	199
Alcoholism	3	3	4
Reimbursements	51	52	62
Contract Health Care	17	17	16
Sanitation	461	462	455
Public Health Nursing	289	299	286
Health Education	64	64	50
Tribal Management	12	14	0 1/
Direct Operations	616	617	687
Medicare	572	639	695
Medicaid	270	294	325
Total	11,331	11,618	12,146
Sanitation Construction	287	260	228
Total IHS	11,618	11,878	12,374

1/Transferred to Direct Operations in FY 1989.
2/FY 1989 increase in projected FTE's due to programming adjustment that captured FTE records that were not recognized in previous years.

INFORMATION RESOURCE MANAGEMENT

Question. The budget (p. 82) requests an additional $3.1 million and 72 FTE's for improvement and expansion of the IHS information resource management program. Why are additional computer support personnel necessary?

Answer. The additional computer-support personnel are necessary to improve IHS-wide support for resource and patient management systems at the IHS/Tribal facility level and to improve the timeliness of software development.

The health facilities computer-support personnel will provide needed technical support, training, and user support at the facility level. Area Office staffs are limited and additional personnel are required to support the evergrowing technical requirements, training, and user support required at the facility level.

The development center computer-support personnel will provide timely software development to meet resource and patient management automation requirements. Presently, there is no software development effort of the magnitude required within IHS. After review, we have adopted the Department of Veterans Affairs (DVA) software development model which will enhance our ability to meet our automation requirements and are prepared to implement this approach.

The IHS plan is to promote coordination and control of existing and new systems in a distributed data processing framework to promote local control.

As IHS nears completion of the initial phase of compatible systems installations and software applications, primarily directed at the hospital and clinics, the needs for system maintenance, technical support, and user-support requirements of the installed systems is beginning to overwhelm limited Area staffs. In addition, the IHS approach of an integrated database to reduce redundancy of data, improve quality and accessibility to patient information, and integrate patient and related administrative records constitutes a major effort which requires additional technical capability to implement.

Examples of current problems which will be addressed are:

a. Lack of technical support personnel to provide hardware and software maintenance at the local facility level. This request will provide additional technical personnel to support the growing maintenance requirements of the growing installed software base and future software releases. Presently, limited personnel are available to maintain software changes, modifications, the installation of new and updated versions, software testing for verification, trouble-shooting and analysis, and operating system maintenance. Software releases are scheduled on a regular basis and when released, it must be installed in all systems for data compatibility throughout the IHS system. In addition, the computer hardware must be maintained and monitored to assure physical data security, integrity, and user support.

b. Lack of technical support personnel to support the increasing user demand for software applications. This request will support the increasing demand for user support in software applications training, installations, instruction, and local program development; specifically, the Patient Registration System (PRS) required the training of medical records personnel in the functionality of the system and the system management required for data integrity and security. Each application requires intensive training at the user level to acquaint users with the application and use of the computer hardware.

c. The array of uncoordinated service-specific data systems that have developed in response to specific information needs are required to be converted from a single purpose to a multiple integration of data environment requiring technical capacity to meet the technical complexity of a data integration environment. This request will support the required technical capacity for the continued development of the Patient Care Component methodology which will serve as the focal point to integrate patient-related data with administrative records.

Examples of efficiencies promoted are: The conversion of existing data systems into a MUMPS hardware/software compatible environment; conversion of the existing Contract Health System which is available for IHS-wide distribution and which, when fully implemented IHS-wide, will eliminate outmoded hardware; conversion of the Area finance component to a hardware/software compatible system; the stores inventory system is being developed into a hardware/software compatible system.

Question. Could existing personnel be trained on the use of the new systems?

Answer. Existing personnel are presently trained on the use of any new systems. As a matter of practice, a cross-section of users are included in any systems design, development, testing, and final certification for release. This cross-section includes the health center, Area Office, and tribal users. New systems are directed toward the end-user and are designed to be user-friendly. For example, medical record staffs are trained in the use of the PRS; pharmacists in the outpatient and inpatient pharmacy systems. However, the funds requested are directed toward computer systems analysts/programmers and technical experts which require many years of specialized training and experience before an employee could be functioning at a reasonable level.

Question. The budget justification indicates that automation will reduce administrative costs. What is your estimate of the savings that will be incurred?

Answer. The FY 1990 President's budget assumes an estimated savings of $4,118,000.

Question. Why aren't these savings reflected in the budget?

Answer. The savings are reflected in the FY 1990 budget on page 82 for $3,908,000 and page 143 for $210,000.

Question. Funding of $1.5 million within the requested increase is proposed for Regional Automation Support Centers. Are there any such support centers at present?

Answer. No. The support centers which we are requesting are modeled after the Department of Veterans Affairs (DVA) approach to software development. The support centers primary responsibility will be developing software for the following categories:
1) Administrative and engineering, 2) outpatient, 3) inpatient,
4) tribal requirements. However, we do have approximately 10 staff located at Albuquerque and Tucson who are performing software development functions similar to those which will be included in these centers.

Question. If the computer support is available through the Area and Headquarters Offices, why are these centers necessary?

Answer. The computer support available through the Area and Headquarters Offices provide no support or a minimal amount of support of this type of development activity on a continuous basis. These centers will specialize in IHS-wide programming requirements which are necessary to support continued timely software application development for the automation of resource and patient management systems. The development center, modeled after the DVA, will concentrate on software application development.

The development center concept to develop software programs does not exist within IHS nor do positions exist which could be marshalled to accomplish this effort in a prudent and timely manner. The development center programming requirements will include new software to be written and DVA furnished software to be reviewed/modified, commercial source code to be modified (if available) to meet IHS standards, and to develop software applications which are unique to IHS comprehensive health care delivery practices.

CONTRACT CARE

Question. The budget projects savings of $4 million in FY 1989 for contract care. On what basis is this $4 million savings assumed?

Answer. The projected cost savings are attributed to the implementation of the Indian Health Service (IHS) payment policy and through the use of a Fiscal Intermediary (FI) agent to process and pay the IHS Contract Health Service (CHS) medical claims. The IHS payment policy pays medical providers in the private sector at or below the Medicare allowable rates. The FI process assists the IHS in the actual implementation and application of the IHS payment policy.

It is important to note that the IHS does not realize a dollar savings as a result of the implementation of the IHS payment policy; but, instead the IHS is able to provide additional health care services to the IHS patients within the current IHS CHS appropriation.

Question. What happens if the savings don't occur?

Answer. If no savings are realized in FY 1989, then the Indian Health Service (IHS) will provide the level of medical care services that the current IHS CHS appropriation permits.

HOSPITALS AND HEALTH CLINICS

Question. Last year, the Committee requested additional detail regarding the funding contained in the Hospitals and Clinics line of the budget. The FY 1990 budget contains some of the information requested. For the record, please provide more detail regarding the funding contained in the General Clinical Care category.

Answer. The General Clinical Care category under Hospitals and Clinics represents program funding activities that are necessary for health care operations, not under an existing budget line item. These activities include general medical services, obstetrics, surgical, optometric, laboratory services, x-ray services, pharmacy, and medical social work.

Question. Why has IHS proposed to lump over half of the funding requested for Hospitals and Clinics in this catch-all category?

Answer. These funds are aggregated in the General Clinical Care category under Hospitals and Health Clinics to represent the comprehensive range of services provided to patients in the IHS health care setting. To a great extent, these services are integrated and support the provision of care to individual patients.

PAY COSTS

Question. What costs did IHS absorb in FY 1989 associated with the January, 1989 pay raise? Please provide detail regarding the distribution of these costs across the different program activities.

Answer. The following table identifies the absorption in FY 1989 of $13,437,000 by program activities associated with the January, 1989 pay raise:

	1989 Pay Raise Absorption
Hospitals and Health Clinics	$10,491,000
Dental Health	667,000
Mental Health	262,000
Alcoholism	6,000
Contract Health Care	20,000
Total Clinical	$11,446,000
Sanitation	$ 566,000
Public Health Nursing	342,000
Health Education	78,000
Total Preventive	$ 986,000
Tribal Management	$ 17,000
Direct Operations	$ 988,000
Total	$13,437,000

Question. What is the additional increment IHS must absorb in FY 1990 for the January 1989 pay raise? Provide detail by activity.

Answer. The IHS FY 1990 budget request includes $4,470,000 for annualization of FY 1989 pay costs as follows:

Hospitals and Health Clinics	$3,497,000
Dental Services	222,000
Mental Health	87,000
Alcoholism	2,000
Contract Health Care	6,000
Sanitation	189,000
Public Health Nursing	114,000
Health Education	26,000
Direct Operations	327,000
	$4,470,000

MANAGEMENT IMPROVEMENTS

Question. As a program emphasis for FY 1989 and FY 1990, IHS indicates (p.67) that it will encourage and support the application of effective quality assurance measures. Exactly what are these quality assurance measures?

Answer. Quality assurance is interwoven through each level of the Indian Health Service. The focus of activity at the service unit level is on the Joint Commission on Accreditation of Healthcare Organizations' standards. In the past several years, the Joint Commission standards have shifted, now principally being concerned with quality assurance or patient outcome activities at the health facility. These activities include the monitoring and evaluation of inpatient, ambulatory, and emergency room care; infection control; safety; risk management; credentialing and privileging of medical staff, discharge planning, etc. In addition, program evaluations are conducted at both Headquarters and Area Office levels by the various program divisions and branches (e.g., dental).

The programs are evaluated using a survey instrument; and, recommendations for improvement are provided to the administrative head for implementation.

There are ongoing IHS-wide initiatives which affect the quality of health services.

- A comprehensive credentialing and privileging policy is being implemented to improve the screening of medical staff prior to granting medical staff membership.
- All medical administrative tort claims are evaluated by the local medical staff, by a speciality consultant, and by an interagency Quality Assurance Panel. As a result of these evaluations, risk management recommendations are made to the Area Chief Medical Officer for implementation.
- Teaching packets containing sanitized tort claim cases, discussion material and pertinent journal articles are developed quarterly and distributed IHS-wide for medical staff discussion. Specific quality assurance/risk management issues are highlighted in each packet.

Question. How are they determined?

Answer. The Indian Health Service is mandated for all facilities to be accredited by the Joint Commission. The Joint Commission establishes standards for health care organizations to meet as stated in Joint Commission publications. These standards have certain characteristics; they are valid, that is, they relate to the quality of care or service provided; they are optimal, reflecting the highest state of the art; they are achievable, meaning that compliance with them has been demonstrated in an existing facility; and, compliance with them is measurable.

Question. Are they associated in any way with activities necessary for accreditation?

Answer. Quality Assurance activities are the central core of the accreditation process. The Joint Commission is dedicated to quality of care in all major types of organized health care settings. All of the standards are a part of a process that assures that the health care delivery system being surveyed is providing health care at a quality level, and that patients can utilize the facilities without fear of receiving substandard care.

Question. How much is being spent on these measures in FY 1989? How much is estimated for FY 1990?

Answer. During FY 1988, $1.7 million was expended on dedicated quality assurance program; and during FY 1989, these same issues will be addressed and we estimate that $2 million will be obligated specifically for quality assurance. With the increased emphasis on quality assurance activities by the Joint Commission, we anticipate obligating approximately $4 million Hospital and Clinic funds during FY 1990. The increase in obligations are the result of proper coding of expenditures and an increase in quality assurance activities. These activities are the result of changing standards. Ongoing quality assurance programs are required to review the quality and appropriateness of care in all departments of the hospital; e.g., laboratory, nursing, radiology, emergency services, etc. In addition, hospital-wide functions such as infection control and safety must be included in all quality assurance programs.

GENERAL BUDGET

Question. From FY 81 to FY 89, your budget has nearly doubled ($537 million in FY 81 to $1.1 billion in FY 89). In addition, you have requested an increase for FY 90 to nearly $1.1 billion. During the same time period, we have experienced an increase in demand of 29 percent.

The budget indicates that progress has been made in raising the health status of the American Indians and Alaska Natives. Nonetheless we continue to hear that this is not enough and more funds are necessary. For example, your opening statement indicates that Indians still have higher rates of death from diabetes, liver disease, and tuberculosis. What are we doing wrong?

Answer. The progress that you have noted in the question is indeed substantial. In particular, the mortality rates due to liver diseases and tuberculosis have been reduced by 50 percent in the last 10 years. Diabetes has increased slightly in the same time period. The progress that has been made is attributable to the maximization of medical strategies (e.g., early case-finding, access to appropriate quality of care, and enhances provider skills). These efforts must be maintained. Other health interventions are, however, appropriate to address the primary prevention of these illnesses through effective education efforts targeting individuals and groups at high risk for these diseases. These interventions are only rudimentary in American Indian and Alaska Native communities at this time. Lastly, there is a variety of socioeconomic factors that are underlying contributors to these diseases that are outside the realm of the health program (e.g., poverty, isolation, and cultural factors).

Question. As budgets become tighter, how have you analyzed your program to see how it can be more productive?

Answer. A variety of methods have been utilized to assess program productivity. The most central component of this effort has been operations analysis and the Resource Allocation Methodology. This activity annually analyzes a variety of performance factors and utilizes these as "driving variables" to allocate resources. Included in these analyses have been such factors as bed utilization rates, visits per capita, etc. Constraining the use of pure productivity measures, however, is the need to: assure access to services and the diseases affecting the particular population subgroup. In these areas, mortality data, case-mix indices, geographic factors, and statutory requirements have been considered in these analyses.

In addition to these "in-house" assessments, a variety of external experts are utilized on regular basis. For example, the College of American Pathologists under a contract with the Indian Health Service, reviews over 80 laboratories for quality and productivity annually. Other expert groups which perform such assessments include the American Academy of Pediatrics, the American College of Obstetrics and Gynecology, American Academy of Family Practice, National League of Nursing, and others.

FACILITIES

Question. The Ganado Community Development Corporation (GCDC) has proposed to construct a 10-12 housing unit for the IHS staff at Kayenta, Arizona. In return for an IHS payment of 50 percent, the corporation has offered to build the units, operate and maintain them and make them available for occupancy by IHS employees at rates equivalent to rents that would be charged if the units were IHS owned (pg. 46). What has been your response to this offer?

Answer. The Indian Health Service (IHS) is interested in exploring alternative ways to construct housing for IHS staff and welcomed the opportunity to participate with the GCDC in this joint-venture demonstration project. The Navajo Area IHS, the GCDC, and community representatives have worked since August 1988, to identify and resolve issues influencing the development of a negotiated construction agreement.

Unfortunately, a recent increase in the estimated cost of construction to meet the minimum for IHS staff quarters has raised serious questions about project feasibility. Based on the initial cost estimate for the design and construction of a smaller unit, an IHS contribution of $200,000 would have been its share of the construction cost. This amount was authorized by the Congress for Fiscal Year 1989 (Public Law 100-446). In March, the GCDC submitted a revised cost estimate that is much higher than originally proposed ($864,000 versus an initial estimate of $400,000) and is requesting a $640,000 contribution from the IHS in order to build the units. This greatly exceeds the amount authorized. The IHS does not have the additional funds or authority to fund the amount now being requested; therefore, the project has been suspended until these issues are resolved.

Question. Could GCDC construct these quarters sooner than the Government? If so, why?

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Answer. If the project proceeds, it is likely that GCDC would be able to provide finished units sooner than the Government. By providing an IHS grant directly to GCDC for design and construction, the amount of time required by the Government for Architect/Engineer selection and construction contract award (6 to 9 months) could be shortened significantly.

Question. Where is this project on the priority list?

Answer. During the most recent application of the Quarters Priority System, Kayenta ranked high on the list of projects approved for Phase II consideration. Once the Areas have prepared and submitted Phase II documents, a final priority ranking of projects will be developed. It is expected that Kayenta will be among the highest ranked projects.

Question. How would you fund your share of this project should you decide to proceed?

Answer. Originally the Indian Health Service intended to seek approval to reprogram unobligated balances from existing construction projects to fund the Government's share of this joint-venture project. This would have permitted more timely project funding. The IHS does not have the additional funds or authority to fund the increased amount being requested by the GCDC; therefore, the project has been suspended until these issues are resolved.

Question. Have you received any other similar offers?

Answer. We have received offers from tribes/Indian organizations to provide facilities through a variety of funding options including lease-purchase, build-to-lease, and build-to-buy. However, we have received no other offers from tribes expressing interest in a joint-venture project like the one being proposed for Kayenta.

BUDGET STRUCTURE

Question. You have again proposed to split the IHS program between a Federal health care delivery system administered by Federal employees, and a tribal health care delivery system administered by tribes and tribal groups (pg. 47). The justification states that separate requests for the Tribal and Federal Indian Health Administration are intended to promote the Tribal Health Administration and reflect continued support for locating program administration at the local level. The proposal is designed to help IHS entrust 75 percent of Indian Health Hospitals and Clinics to the Tribal Health Administration by FY 98.

Since the bill language you have proposed would allow the Department to transfer the funds between the accounts (pg. 3), I am skeptical of the advantages. What are the advantages to the two accounts if you can move funds back and forth?

Answer. A separate request for Tribal health administration will highlight the importance of tribes and tribal organizations in providing health care services as well as the potential for expansion in tribal administration.

Question. Does this proposal mean that you are not promoting local program administration?

Answer. No. Funds will be provided to local program managers consistent with the negotiated terms in self-determination contracts as they have in the past under a single appropriation. Should a Tribe or Tribal organization decide to assume responsibilities for managing its own health care delivery system, funds would be reprogrammed/transferred to the Tribal Health Administration account. The decision to retrocede would require a transfer of funds in the opposite direction. The dual appropriation of funds should actually improve the stability of local program funding for managers by increasing Federal accountability and tracking expenditures by program activity.

Question. How much progress have you made in entrusting the Tribal Health Administration with these responsibilities?

Answer. Tribes currently operate 52 (41 percent) of 127 Service Units; 7 (14 percent) of 50 hospitals; 313 (70 percent) of 444 outpatient facilities; and, 11 (23 percent) of 48 other treatment locations. This represents the level and progress of self-determination decisions made by Tribes.

Question. How would this help?

Answer. The proposed structure specifically appropriates funds for Tribal Health Administration increasing the stability of the funding base for these programs. Future Tribal self-determination contracting decisions could actually be negotiated with the knowledge, that as part of the planning process, the proposed transfer of Federal program funds and activities would be reflected in the annual IHS congressional budget request.

Question. What other budget changes were studied to accomplish the 75 percent goal?

Answer. No other budget structure changes were requested.

RELOCATION OF IHS HEADQUARTERS

Question. The justification indicates that the IHS (pg. 53) will study the possible relocation of IHS Headquarters during FY 89. What is the status of this study?

Answer. The preplanning and design work for the study have been completed. The study will address the relocation of IHS Headquarters by focusing on how the mission of the IHS will be enhanced and on what the relevance of IHS Headquarters relocation will be to the IHS field sites. Study methodology will include cost benefit analysis, functional analysis, and descriptive summaries of operational, administrative, and policy activities within IHS. A review of the IHS staffing pattern, consideration of available locations outside Rockville, Maryland, and an analysis of the Office of Health Program Research and Development, Tucson, and the Clinical

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Support Center, Phoenix, will be included. The study will be conducted by consultants with IHS staff support work. The study is on schedule and will be carried out during the third quarter of FY 1989; results will be reported in the fourth quarter.

DENTAL HEALTH

Question. The budget requests $2.8 million for the tribal dental health program. This will maintain services to an estimated 63,000 Indian patients (pg. 59). The cost per patient for these services is considerably lower than the dental health program which serves 250,000 patients at a cost of $30.2 million (pg. 52). Is the type of care different? If so, why? If not, why the discrepancy?

Answer. Workload data reflects services provided directly and also purchased in the private sector, whereas budget requests reflect only direct dental dollars. However, a significant amount of nondental dollars support tribal direct care programs. When Contract Health Services and Hospitals and Clinics dollars expended for dental care are counted along with those specifically requested for Dental Health, analysis of workload and cost data show the unit cost figures for tribal programs are slightly higher than IHS.

The types and overall quantity of services offered by tribal programs are very similar to those of IHS-operated programs. However, Tribal programs tend to provide more services per patient and a slightly greater proportion of complex services, which means a higher cost per patient. Other factors that may explain the higher cost:

- Malpractice coverage costs borne by Tribal programs.

- A high proportion of tribal dental programs are located in Alaska and California which are higher cost Areas. For example, the average salary and support cost for a position in Alaska is $57,175 compared to $43,499 for other IHS Areas.

- The use of expanded function (EF) dental auxiliaries in IHS facilities greatly enhances productivity in settings where appropriate. A dental team employing expanded duty dental assistants is able to provide approximately 20 percent more service-minute units of work than a nonexpanded team.

- Tribal programs may be smaller and lose the efficiency of economy of scale.

MEDICARE AND MEDICAID

Question. In addition to general budget authority, the IHS anticipates collection of approximately $73 million in Medicare and Medicaid reimbursements. This represents a $2.0 million increase over 1989. The IHS intends to use $68 million of this to correct the Joint Commission on Accreditation of Health Care Organizations and Health Care Financing Administration survey deficiencies (pg. 64). Can you elaborate on the deficiencies cited by the Joint Commission and by the HCFA survey?

Answer. The majority of deficiencies lie in the area of Facility Safety and Construction, Hospital Policy and Procedures, Medical Staff Function, Quality Assurance Activities, and Professional Staff Activities. Many of these are related to new guidelines and more stringent standards being applied by the Joint Commission, especially in the area of Quality Assurance. For example:

Diagnostic radiology
Medical Records
Medical Staff
Governing Body
Pharmaceutical Services

Question. What are the funding recommendations made in those studies?

Answer. There are no funding recommendations made in the surveys. The surveys identify deficiencies, most of which require varying funding levels to correct.

Question. How much will these funds improve the 93 percent hospital (pg. 65) accreditation from the Joint Commission?

Answer. If there is a change in the role of Owyhee to ambulatory and other nonacute care activities, IHS will have 100 percent of its hospitals accredited. The funds will be used to maintain the accredited status of the hospitals.

ACCREDITATION

Question. Currently 93 percent of IHS hospitals are accredited. Yet only 44 of the 66 IHS health centers have achieved accreditation from the Joint Commission (pg. 78). Why are you not doing as well with health centers as you are with hospitals?

Answer. Forty-four of Indian Health Service Health Centers are accredited by the Joint Commission. This is a new initiative started in FY 1981 as compared to the much longer history of Joint Commission accreditation of hospitals. We are making excellent headway. One facility was accredited in FY 1981 and as of FY 88, 44 are now accredited. The IHS is generally ahead of the rest of the nation in seeking accreditation of ambulatory facilities.

IHS REORGANIZATION

Question. On November 4, 1987, the Secretary approved a reorganization order which elevated the IHS to an agency in the U.S. Public Health Service. This action is in furtherance of the President's 1983 message on Indian self-determination and the need to raise the priority on addressing the health care needs of American Indians and Alaska Natives.

On January 4, 1988, this elevation became official and, according to the justification, this increased the ability of the IHS to collaborate with other agencies in targeting other Federal and non-Federal resources to increase health service delivery to

Indian people (pg. 65). How was the formulation of this budget different from the formulation of budgets prior to your elevation?

Answer. The Health Resources and Services Administration, HRSA, is no longer in a supervisory role over the Indian Health Service budget formulation process.

Question. Can you cite some specific examples in the FY 1990 budget which targeted other Federal and non-Federal resources?

Answer. Included in the FY 1990 budget are approximately $1 million reimbursements collected for medical care received by nonbeneficiaries at Indian health facilities, intra-agency agreements among the National Institutes of Health, National Institute of Arthritis, Diabetes, and Digestive and Kidney Disease (NIADDK), and a number of smaller agreements with other agencies.

PHYSICIAN CERTIFICATION

Question. The FY 89 justification (pg. 43) indicates that 70 percent of the physicians on duty have achieved board eligibility or certification in a medical specialty. The FY 90 justification, however, indicates (pg. 65) that "more than 65 percent of physicians are either certified by the appropriate board or eligible for certification." It appears that the quality of physicians has diminished from the FY 89 budget to the FY 90 budget, as has the criteria. Could you elaborate on this shift?

Answer. There has been no shift. There was just a difference in style and presentation of the information in the two budget justifications. The percent of Commissioned Corps physicians who are board-certified is currently 69 percent (396 of 571). It is our assessment that a similar percent of civil service are board-certified.

Question. Why isn't the percent of certified doctors 100 percent?

Answer. The IHS has many locations, particularly health centers where physicians in general practice are needed and utilized to provide medical care. These physicians have completed medical school and at least one year of an approved residency, are licensed by a state medical/osteopathic board, and have had their credentials reviewed and been granted specific medical staff privileges by the facility governing board. These physicians in general practice are not eligible for certification by a medical specialty board, as they are not specialists. Most specialty boards require three to five years of residency training to be eligible to take their examinations. Physicians with this amount of training are not needed in certain locations, where the need is for the generalist.

An additional reason is that most physicians join the Indian Health Service at the completion of residency training. However, certain specialty boards, particularly in obstetrics and gynecology and the surgical specialties, require at least two years of clinical practice after completion of residency before one is eligible to take the specialty board examination. Therefore, these physicians cannot become board-certified during this time.

FACILITIES REPAIR

Question. Over the past three years, the IHS has expended $13 million for major repair and renovation work at 35 IHS health care facilities. In addition, $86 million has been expended for planning, design and construction of 9 new/replacement hospitals, 8 health centers, and 516 staff quarters (pg. 66). Does this complete the work at these facilities? If not, what additional funds are necessary?

Answer. No. The Facilities Engineering Deficiencies System (FEDS) database has identified approximately $66 million of additional deficiencies at the 30 hospitals and 5 health centers that have had major repair and improvements work accomplished over the past three years.

Question. What repair work needs to be done at the remaining health care facilities?

Answer. Deficiencies identified at the remaining IHS health care facilities include code deficiencies (i.e., fire and life safety, safety, environmental quality, handicapped) and a backlog of essential maintenance and repair (BEMAR) work (i.e., roof repair/replacement, air-conditioning, ventilation and heating system replacement, etc.).

SANITATION SERVICES

Question. In FY 87, more than 6,000 American Indian and Alaska Native homes were funded to receive new sanitation facilities for the first time, while improved sanitation facilities were provided to nearly 2,300 additional existing houses. According to the justification, with completion of these facilities, over 80 percent of the Indian houses have safe water and an adequate means of sewage disposal. This compares to a national average of 98 percent for all U.S. populations. What is the schedule for completion of these facilities?

Answer. Nearly all of the 6,000 American Indian and Alaska Native homes, for which funds were appropriated in 1987 for new sanitation facilities, are now being constructed. Thus, completion of the sanitation facilities is somewhat dependent on the new home construction schedule. Typically 50 percent of these projects are completed in 2 years and the remainder within 4 years.

Question. How much of the 2 percent U.S. population without facilities is made up by American Indian and Alaska Native homes?

Answer. Approximately 22,000 American Indian and Alaska Native homes lack adequate water and sewerage facilities. Two percent of the U.S. population would occupy approximately 1.5 million homes. Thus, American Indians and Alaska Natives without adequate water and sewerage represent approximately 1.5 percent of all U.S. homes without adequate sanitation facilities. The present Indian population is approximately 0.4 percent of the U.S. population.

INDIRECT COSTS

Question. The Indian Self-Determination and Education Assistance Amendments of 1988 require the Secretary to provide 100 percent of the indirect costs associated with self-determination contracts (pg. 76). The budget requests an increase of $28 million (+64 percent) for indirect costs to be fully consistent with the requirements of the Act. In addition, the proposed FY 90 level is more than double the FY 88 level of $33 million. The FY 90 budget request is based on estimates which the Department indicates may require future revisions as better information is available. This budget is now several months old. Are the estimates still firm?

Answer. Yes. The estimates are the same.

Question. What is current funding percentage of Indirect cost?

Answer. In FY 1989, the funding percentage for indirect costs represents approximately 70 percent.

Question. Wouldn't it be more efficient to move into the 100 percent requirement over two or three year period?

Answer. P.L. 100-472, which will be implemented FY 1990, requires the IHS to provide "full funding of the Indirect Costs of Tribal contracts." The FY 1990 budget indicates a total of $73.1 million will be available from direct appropriations and reimbursements from private insurance to fund Tribal contracts at 100 percent of their Indirect Costs.

TYPES OF HOSPITAL EXPENSES

Question. The chart on page 80 indicates that expenses for personal services increased 11 percent from FY 1988 to FY 1990, and contracts and support have increased 29 percent over the same time period. Expenses for supplies and equipment, however, have remained level since FY 1988. What is included in the supplies and equipment category?

Answer. The following table identifies some of the items included in the supplies and equipment category.

	Supplies	Equipment
1.	Drugs, medicines, and vaccines	Furniture (medical/office)
2.	Blood and blood products	ADP
3.	Surgical	Instruments
4.	Prosthetic and orthopedic	Implements
5.	Laboratory	Books
6.	Office	Transportation
7.	Housekeeping	Telecommunications
8.	Laundry	
9.	Subsistence	
10.	Fuel	

Question. Is this chart consistent with non-IHS hospitals?

Answer. Yes, the private sector is experiencing the same general inflationary increases as the Indian Health Service.

Question. How are the supplies and equipment needs of Service Units (hospitals) assessed?

Answer. The equipment needs of the Service Units (hospitals) throughout the Indian Health Service are assessed through requirements determination. This process identifies equipment needs, describes those needs, and then states the authority and justification for the acquisition of the equipment.

Program officials determine the basis of need; i.e., new or expanded program to increase production or efficiency, increased workload, need for replacement, reasons for health, safety, or protection and justify the property requirement. The Service Unit, property or administrative staff, in the requirements determination process, takes into consideration that 1) no similar property is on hand, 2) similar property on hand is being used for approved purposes to the maximum extent possible, or 3) that the property requiring replacement cannot be economically continued in use and meets applicable use and replacement standards. Equipment requisitions are forwarded to the Service Unit equipment committee where acquisitions are prioritized for purchase.

The supply needs of Service Unit (hospital) are assessed on several methodologies.

A Service Unit conducts a medical supply inventory on an ongoing routine basis. The actual value of the inventory and the number and type of supply are derived from monthly receiving documents. Supplies are assessed as follows:

Cost of supplies	- Actual cost per Service Unit.
Supply in stock	- Number of months supply in stock at the Service Unit.
Supplies (inactive)	- No issues for that supply for the 12 months.
Supplies (active)	- Number of purchase orders received per type of supply to determine cost effectiveness of bulk purchase order and projections for in-stock requirements.
Government sources	- Supplies ordered from Department of Veterans Affairs (DVA), General Services Administration (GSA), and Perry Point Depot, etc.
Contract sources	- DVA or Federal Supply Service (FSS).
Open market sources	- Noncontract vendors.

The major change in procurement of medical supplies has been the decreased use of and/or the decreased availability of items being on the DVA decentralized supply contracts. The total percentage of supplies purchased from DVA contract was approximately 30 percent in FY 1984 and approximately 23 percent in FY 1988.

Efforts are being made to identify items being purchased on the open market for possible stocking by Government depots.

Recurring use items are maintained on an automated inventory system. As part of the inventory system, a monthly requirements analysis report is generated that identifies those items that are reviewed for ordering. Quantity to be ordered is based on the Economic Order Quantity principal of stock replenishment.

Question. Do the needs requested for supplies and hospitals match the expenses? If not, why not?

Answer. Yes. The supply needs are maintained at the current level of operations.

PRIVATE INSURERS COLLECTIONS

Question. The IHS proposes to collect approximately $40 million from private insurers as authorized in the Indian Health Care Amendments of 1988 (P.L. 100-713). A major portion, $23 million, is proposed to fully fund the indirect cost needs of existing tribal contractors.

To collect the $40 million, IHS is planning (pg.102) to develop a billing system based on reasonable charges for services that are provided and will attempt to establish billing procedures based on the general fee-for-service concept rather than rely on an all inclusive rate (such as Medicare prospective payment). Why have you decided to collect from private insurers in this manner? Aren't private insurers already used to the inclusive rate?

Answer. Indian Health Service is developing a fee-for-service billing system because most private insurers require an itemized bill enumerating specific charges for services rendered. In some instances insurers will accept an all inclusive charge. The IHS itemized billing format does not preclude reimbursement at an all inclusive rate.

The Medicare prospective payment system does not provide for outpatient services. Therefore, a system for billed charges must be developed for this aspect of our health care delivery system. Most private insurance contracts require an itemized billing because there are limitations on the amount and types of services covered. An all inclusive rate does not allow an insurance company to see what it is paying for and as a result will, in most instances, deny the claim.

Question. What is the proposed use of the remaining $17 million?

Answer. The following is a breakdown of the proposed use of the $17.0 million:

Purchase of ADP equipment	$11.1 million
Other tribal operations	2.4 million
Purchase Medical Equipment	2.0 million
Purchase of supplies	1.1 million

(Note: $23.4 million is for indirect costs)

CONTRACT CARE

Question. The Budget indicates that an additional $12 million (+5 percent) is necessary in FY 90 as part of the "built in" increase for Contract Care (pg 108). Since FY 81, funding for Contract Care has increased from $95 million in FY 81 to a proposed FY 90 level of $226 million. Can you elaborate on some of these "built in" increases relating to contract care?

Answer. Since FY 81, the Contract Health Services (CHS) budget level included an annual inflation allowance found in the Consumer Price Index for medical care. This built-in inflationary rate allows Indian Health Service (IHS) to meet the rising cost of medical care purchased from the private sector.

A 5.8 percent inflationary rate was applied to the FY 1989 CHS budget of $214,454,000, arriving at an increase of $12,202,000 for the FY 1990 budget.

Two other program increases found in the CHS budget from FY 1987 to present, that were not in previous years' budgets are deferred services, and the catastrophic health emergency fund (CHEF). For the current fiscal year, the CHS budget has $10 million for deferred services and $10 million for CHEF.

HOSPITAL TYPES

Question. What is a rural health facility model with swing beds for limited acute care, rehabilitation care, and convalescent care?

Answer. A variety of rural health models utilizing swing beds and other service innovations have been identified in the literature. The IHS has reviewed these and incorporated those activities or innovations which complimented the IHS delivery system. The swing bed concept has not been implemented because IHS is committed to acute and preventive care services.

Question. How does it differ from the current IHS facilities?

Answer. Current IHS facilities are acute care facilities only, providing the normal range of services for IHS patients who require acute care services. The rural model discussed above has the additional services of skilled level long-term care and rehabilitation care. However, some service units may add services in the future for substance abuse detoxification and other purposes to effectively use excess bed capacity within existing staffing and training levels.

Question. If rural health facilities are different from IHS facilities, what are the advantages/disadvantages of each?

Answer. The difference in this instance would be the long-term care issue. Provision of long-term care is not within the IHS medical priorities and funding level. If long-term care (rehabilitation and convalescent care) were provided, it would be at the expense of acute care services and would cause the unmet acute care needs to grow.

Question. Have you ever analyzed rural health facilities?

Answer. Yes. The IHS has continually reviewed the literature concerning developments and innovations in rural health delivery. In addition, site visits have been conducted at a variety of non-IHS rural health facilities.

Question. If so, what was your conclusion?

Answer. Our conclusions regarding implementing a swing bed program for the Indian Health Service are:

1. There is a need for an institutional Skilled Nursing Facility (SNF) and an Intermediate Care Facility (ICF) long-term care in many Indian communities.

2. The provision of long-term care by the use of swing beds does not mean permanent nursing home placement. It is temporary nursing home placement, pending permanent placement.

3. The Indian Health Service has been, and is currently, funded for acute care but not long-term care.

4. The provision of a swing bed program in IHS acute hospitals would not be cost effective or financially feasible. This is because of the additional resources required to implement the program. These additional resources include specialized rehabilitative services, patient activities staff, and several other requirements such as space for conjugal visits with spouse, nursing staff trained for long-term care activities, etc.

Question. Of the 43 hospitals, 66 health centers, 5 school health centers and 100 smaller health stations and satellite clinics, how many are acute care inpatient facilities versus traditional outpatient facilities?

Answer. The 43 IHS hospitals are acute care inpatient facilities. The IHS health centers, school health centers, smaller health stations, and satellite clinics are traditional outpatient facilities.

HOSPITAL TYPES

Question. An alternative to traditional inpatient hospitals and outpatient clinics is being used quite successfully in rural communities that are having trouble maintaining financially viable hospitals. Under this new model, the facility maintains "swing beds" that are used for limited acute care, rehabilitation care, convalescent care, etc. These communities have found that this model makes more sense in a rural community from a financial and medical perspective than does either the traditional inpatient facility or outpatient clinic. Does IHS currently operate any facilities which utilize this type of facility?

Answer. No.

Question. If not, why not? What were the conclusions of any feasibility studies?

Answer. Our conclusions based on previous feasibility studies are:

1. There is a need for institutional SNF and ICF long-term care in many Indian communities.

2. The provision of long-term care by the use of swing beds does not mean permanent nursing home placement. It is temporary nursing home placement, pending permanent placement.

3. The Indian Health Service has been, and is currently, funded for acute care but not long-term care.

4. The provision of a swing bed program in IHS Acute Hospitals would not be cost effective or financially feasible. This is because of the additional resources required to implement the program. These additional resources include specialized rehabilitative services, patient activities staff, and several other requirements such as space for conjugal visits with spouse, nursing staff trained for long-term care activities, etc.

Question. If IHS has not done an indepth study of this model, what funding would be necessary in FY 90? How much could be made available in your FY 90 budget for this purpose?

Answer. We estimate an indepth study of this model would cost approximately $300,000 based on data from the State of Kansas which has done studies on models such as IHS would propose. There are no funds requested in the FY 90 budget for this purpose.

Question. Is there a statutory prohibition to such a study?

Answer. There is no known statutory prohibition to doing such a study.

Question. Please provide the Subcommittee any studies IHS has done on this subject.

Answer. The IHS has not done any indepth studies of the "swing bed" concept.

OWYHEE HOSPITAL

Question. There has been a great deal of controversy over the way the IHS handled the possible closing of the inpatient facility at Owyhee. Where does the matter stand now?

Answer. The IHS has approached the possible closing of the inpatient facility at Owyhee in a very rational and systematic way.

In June 1987, the Phoenix Area IHS was motivated by an Average Daily Patient Load (ADPL) of 1.4 to 2.0 at the Owyhee Hospital to critically evaluate the health care delivery system in the Owyhee Service Unit. This community needs assessment reviewed the current status inpatient, ambulatory, dental, emergency medicine, and community health services in all eight regions of the Service Unit. The analysis revealed a maldistribution of health care services throughout the Service Unit. Consequently, the Phoenix Area proposed closing the infrequently used inpatient portion of Owyhee Hospital and utilize the funds to more equitably provide health care services to the entire population of the Service Unit. The proposal to close the inpatient portion of Owyhee Hospital was initially presented to the tribes on October 1987, by the Area Director. Since that date, the IHS and the tribes have been involved in consultation meetings as a forum to discuss this important issue.

Question. Have funds been provided to the tribe to conduct a feasibility study?

Answer. The proposal to close the inpatient portion of Owyhee Hospital was based on a community needs assessment conducted by the Phoenix Area IHS which revealed low utilization of the inpatient services and great need for access to health care services in other parts of the Service Unit. When the proposal was presented to the tribe, they requested an outside feasibility study. However, at a recent IHS/Tribal consultation meeting the Tribal chairmen voted unanimously to meet as a group to resolve issues relating to how the feasibility study should be conducted. Further discussion regarding a feasibility study will await the recommendations from the group of Tribal chairmen.

Question. Is it your intent to close the inpatient portion before the tribe's feasibility study is complete?

Answer. Definitely not. The IHS has a draft policy on the closure of facilities which requires three phases to the process: 1) Tribal consultation, 2) additional Contract Health Services funds allocated, and 3) 1-year prior notification of Congress of the intent. We are currently in phase one of the process and the steps outlined will be strictly adhered to.

SHOSHONE-PAIUTE

Question. One of our associate directors told my staff that IHS agrees that the Shoshone-Paiute Tribe is the tribe most affected and should have the major role on this issue. I am told the Area Director, however, feels that the decision is to be made with each tribe having one vote, even though most of the other tribes rarely use the hospital and even though the Shoshone-Paiute has as many members as all the other eight tribes combined. What is your position?

Answer. The Indian Health Service is divided into Service Units which represent an integrated system of health care delivery. Changes in one component of the system clearly have an impact on the others. Although the Shoshone-Paiute Tribe is the most frequent user of the Owyhee Hospital, the allocation of resources to keep the inpatient portion functioning in a climate of low utilization results in less funds available to provide for the health needs of the other seven tribes. Therefore, the IHS feels that process which involves all eight Tribes of the Owyhee Service Unit is appropriate.

Question. How will this be resolved?

Answer. The Area Director, Phoenix Area IHS, is currently conducting consultation meetings with the Tribes. The goal is to air all concerns and differences in an effort to reach a consensus among the eight Tribes on the closure of the inpatient services.

Question. Have you ever had a similar situation with respect to the use and population of the tribe?

Answer. No. The IHS philosophy has always been to seek full participation with the different Tribes irrespective of their relative numbers.

Question. If so, how was it resolved?

Answer. Again, the IHS philosophy has always been to back full participation with the different Tribes irrespective of their relative numbers.

Question. Please provide the subcommittee and the record a copy of the facilities priority list.

Answer. Following is the most current IHS Priority List for inpatient care facilities, ambulatory care facilities, and staff quarters:

PRESENT FACILITIES PRIORITY RANKINGS

MARCH 1988 1/				MARCH 1987	
	INPATIENT CARE FACILITIES		AMBULATORY CARE FACILITIES		PERSONNEL QUARTERS
1	Anchorage, AK*	1	Parker OPD, AZ*	1	Kotzebue, AK(50)*
2	Wagner, SD*2/	2	Sallisaw, OK*	2	Pine Ridge, SD(84)*
3	Pine Ridge, SD*	3	Belcourt OPD, ND*	3	Barrow, AK(29)*
4	Kotzebue, AK*	4	Puyallup, WA*	4	Belcourt, ND(28)
5	Shiprock, NM*	5	Taos, NM*		
6	Ft. Belknap, MT*3/	6	Tohatchi, NM*		
7	Ft. Defiance, AZ*	7	Ft. Yuma, AZ*		
8	Crow Agency, MT*	8	Second Mesa, AZ 5/		
9	Winnebago, NB 4/	9	Pinon, AZ 4/		
10	Phoenix, AZ 4/	10	White Earth, MN		
		11	Montezuma Creek, UT		
		12	Stilwell, OK		

* Partially Funded

1/ A list of additional facilities is being evaluated and ranked to select locations to be added to the priority list and will be available 3/90.

2/ Proposed to be changed to Ambulatory Health Care Facility.

3/ Proposed to be changed to Ambulatory Health Care Facilities at Hays and Fort Belknap.

4/ In FY 1989, funds were appropriated for planning study.

5/ On hold at Tribe's request.

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Question. The FY 1990 budget request for the Indian Health Service includes $73,128,000 for full funding of the FY 1990 estimated Indirect Costs of Tribal contracts. Of the total request, the IHS is proposing that $23,405,000 be funded with funds from increased third party reimbursement collections. This provision appears to be in direct contradiction to the provisions of P.L. 100-713, the Indian Health Care Amendments of 1988. Section 207(b) of that Act provides that "The Service may not offset or limit the amount of funds obligated to any Service Unit or any entity under contract with the Service because of the receipt of reimbursements under subsection (a)." In view of this language, how does the IHS justify its plan to fund Tribal contractor Indirect Costs with third party reimbursements? If this provision in the budget request was the result of an oversight of Section 207(b), does the IHS have an alternative for full funding of Tribal contract Indirect Costs funds?

Answer. Section 297 of P.L. 100-713, the Indian Health Care Improvement Amendments of 1988, stipulate that all reimbursements received or recovered "by reason of the provision of health services by the service or by a Tribe or Tribal organization under a contract pursuant to the Indian Self-Determination Act shall be retained by the service or that Tribe of Tribal organization to provide health care services to Indians."

Although no language has been submitted at this time, language would need to be proposed and included in the 1990 Appropriations Act changing Section 297 of P.L. 100-713, the Indian Health Care Improvement Amendments of 1988, to allow the IHS to use third-party collections.

Question. The Indian Health Service clinic for the Confederated Tribes of the Warm Springs Reservation of Oregon is old, small and inadequate, yet, at approximately number 35 on the I.H.S. facilities construction priority list, a wait of fifteen or twenty years is estimated for a new facility there. To provide an improved health care facility sooner than that, the Warm Springs are discussing with the House and Senate Appropriations Committees, and, I understand, the I.H.S. Headquarters staff, the possibility of the Warm Springs Tribes building a new clinic themselves and allowing the I.H.S. to use it rent-free for a number of years.

In return, the I.H.S. would provide some additional staffing and new equipment. The number of years the facility would be rent-free to the I.H.S., the number of additional personnel, and the amount of new equipment for the facility would all be subject to negotiations between the Warm Springs and the I.H.S., with probable review and approval by the Appropriations Committees. I would like to know if this is viewed as a meritorious idea by the Indian Health Service, possibly as a pilot project, and what authorities the I.H.S. would need from the Congress to proceed, at least through negotiations and the presentation of a report to Congress, with this Warm Springs concept?

Answer. The IHS is impressed with the initiative demonstrated by the Warm Springs Tribe in trying to find a viable solution to their facility and service delivery needs. If requested by the Committees, the IHS can discuss the proposed pilot or demonstration project with the Tribe and prepare a report to the Congress without additional authority. However, the IHS cannot lease the facility, purchase equipment, or provide additional staffing for a project without congressional authority and the required resources.

QUESTIONS SUBMITTED BY SENATOR DON NICKLES

Question. I have been receiving several letters a week from Indian constituents who have been denied payment for health care services that were the result of IHS referrals. In every instance the patient was led to believe that IHS would pay for the services, only to be denied later. I might add that the majority of the complaints have come from people who have had life threatening emergencies and who are unable financially to pay for the services rendered. Although I have asked the IHS to look into each case individually, as of yet I have not received a reply as to what is being done about this overall problem. Therefore, I would again question IHS as to what is being done to correct the payment problem? Are alternative methods of payment being considered?

Answer. The problem in the Oklahoma City Area (OCA) and other IHS Areas is a complex one of payment, eligibility, medical priority, and authorization. IHS Area managers are aware that all medical referrals for non-CHS eligible patients to non-IHS facilities are to be made in accordance with the IHS Manual, Chapter 3, sec. 2.3.8, part G(2), which states:

> The Indian person being referred from an IHS facility will be notified at referral time of his/her eligibility status for CHS . . . . In cases where determination of eligibility cannot be made before referral, the individual will be notified in writing that the IHS may not be responsible for the bills incurred.

In light of the above manual policy, the Director of the OCA IHS has established and implemented standardized medical priorities. The Service Units in the OCA have put in place review committees to consider all contract health service payment requests. When considering referrals for patients, a member of the review committee informs the patient that he/she may be responsible for payment.

The IHS Manual requires the use of alternate resources which include, but are not limited to, Medicare, Medicaid, vocational rehabilitation, Veterans Administration, crippled children, private insurance, and state programs. IHS and Fiscal Intermediary personnel coordinate benefits to insure compliance with the requirement to utilize alternate resources.

Question. I have been aware of the severe need for improvements at the Oklahoma City Indian Health Clinic. It is my understanding that although IHS recognizes the need to upgrade the facility, there is currently no priority list to rank the needs of urban health clinics. If this is the case, then what needs to be done to correct the problem so that these clinics, which serve a vast number of Indian patients, can be renovated or moved? Also, if there were such a list, would the Oklahoma City clinic be high enough to receive the needed improvements? Would the Indian Health Service be interested in a possible demonstration project in which the Oklahoma City clinic could receive the necessary improvements?

Answer. The Indian Health clinics in both Oklahoma City and Tulsa are now funded under Hospitals and Clinics budget activity rather than under the Urban Program. This occurred by direction of Congress in the FY 1987 appropriation. Since then, these two clinics have been treated like IHS or tribal facilities rather than as urban clinics. Accordingly, both clinics were submitted by the Oklahoma City Area to be considered for the facilities priority list. The Tulsa clinic need, ranked it high enough to make the Phase I Health Facilities Construction Priority list. The Oklahoma City Clinic did not make the list. The IHS, although recognizing the need of the Oklahoma City clinic, is faced with many other health facilities located throughout the country with a greater need. The IHS Health Facilities Construction Priority System was established as a result of these needs and a desire for an objective process to allocate resources for facilities construction. Any departure from this established process would not be equitable to all the Indian tribes.

It is the mandated responsibility of the IHS to deal with the Indian people on a government-to-government relationship. There is no such relationship with the urban programs. Because of this and because the Indian Health Care Improvement Act and Amendments do not provide for facilities construction and renovation, urban programs are not considered by the Health Facilities Construction Priority System.

Question. It has also been brought to my attention that the clinic in Stilwell, Oklahoma, which serves the Cherokee Nation, is also in dire need of a new facility. However, IHS ranks the facility artificially low because the clinic in Sallisaw, 30-40 miles away, is currently undergoing improvements. This is of concern to me since it is clear that the Stilwell facility has its own large patient load that is separate from those who utilize the Sallisaw facility. Since it is my understanding that IHS concurs that the Stilwell facility needs to be replaced, and considering that it has its own large patient load, will you consider placing it as a higher priority to be replaced?

Answer. The IHS supports replacement of the Stilwell Health Center as well as replacement of the Sallisaw Health Center. Both the Stilwell and Sallisaw Health Centers are currently on the March 1988, Indian Health Service Health Facilities Priority List. The Stilwell facility is not ranked artificially low because of the replacement health center at Sallisaw. However, it is IHS policy that as new projects are added to the existing priority list, they are placed at the bottom of the list. Whereas the Stilwell facility was placed on the priority list in September 1987, and currently ranks twelfth, the Sallisaw facility was placed on the priority list in February 1984, and currently ranks second. Stilwell will move up on the list as facilities that rank higher are completed.

Question. IHS is still pushing proposals to reduce the number of eligible Indians to receive IHS services. What is the current status of these proposals, and is there any discussion about possible health care alternatives for those that will be eliminated from IHS eligibility? Will IHS work to ensure that those made ineligible have some form of health care coverage before eliminating them from receiving services?

Answer. The IHS is not pushing proposals to reduce the number of eligible Indians. Both the Congress and the Executive Branch have recognized the need to better define our service population in order to target our finite resources. The new regulations basically make members of Federally recognized tribes living on or near a reservation eligible for both contract and direct services. This is also the position taken by Congress in all recent tribal recognition acts. The congressionally supported effort to achieve equity funding also requires a clear definition of the service population. The new regulations also reflect a response to the tribes that for the most part recommended that tribes make the determination of eligibility. Since tribal membership is a tribal prerogative, the tribes in effect would be establishing basic eligibility.

As a result of the Fiscal Year 1988 Appropriations Act, the original date for implementing new regulations governing eligibility for IHS services, March 16, 1988, was changed to September 16, 1988. The Fiscal Year 1989 Appropriations Act further delayed the effective date while IHS conducted an impact study on these regulations. The impact study is currently being finalized and will soon be forwarded to Congress.

The proposed regulations provide a number of transition provisions to mitigate the impact on those persons who will no longer be eligible for IHS services under the new rule. These provisions include a grace period, a provision for minor children, and provisions to assure continuity of care for persons under treatment or with chronic degenerative conditions on the day they lose eligibility for up to an additional year beyond the grace period. In addition, the regulations provide appeal rights to those losing eligibility and requires that those patients be offered assistance in locating other health care providers and medical assistance programs. Those with the means to obtain insurance will have time to do so. Those without means will have time and the assistance from IHS to apply for other medical assistance programs. Emergency services for nonbeneficiaries will continue to be available on the same basis as is the case today. It should be pointed out that current eligible rules exclude many Indians from care.

QUESTIONS SUBMITTED BY SENATOR JOHN McCAIN

Question. One area of health services for Native Americans that I have become very concerned about recently -- especially in light of recent hearings before the Special Investigations Committee of the Senate Select Committee on Indian Affairs -- is mental health. As this body -- through the Special Investigations Committee -- gets into issues such as child abuse among Indian people, the great need for mental health services is apparent. I am encouraged at the concern that tribal leaders are showing for their people in this

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area. It has become apparent that there is a great deal of unmet need in the area of mental health services. What level of funding is available for mental health services (to Indian people)?

Answer. The FY 1989 appropriation for mental health services is $13.091 million. This funding supports an average of 2 treatment staff in each of the 127 IHS Service Units. In addition, approximately $1.3 million of contract health service funds is used for mental health services (primarily to purchase short-term inpatient care). In addition, a portion of substance abuse funds is used to provide counseling to persons with alcohol and drug abuse problems.

Question. Does the IHS plan to increase, and perhaps restructure its delivery of services in this area (mental health)? If so, how? What does it estimate as the future cost?

Answer. The President's proposed IHS budget for FY 1990 includes an increase of $491,000 to a level of $13.582 million for the categorical mental health program. Analyses in the draft National Native American Mental Health Plan indicate that the numbers of staff required for an adequate mental health program for Native Americans are at least twice the current levels.

The Mental Health current appropriation supports primarily crisis intervention, along with some limited counseling services.

Although there are no imminent plans to restructure the current mental health program, steps have been initiated to coordinate relevant elements of alcoholism and substance abuse programs with mental health programs. Recently, a Memorandum of Agreement between the two programs was developed to promote collaboration at Headquarters, Area, and Service Unit/Tribal levels. The agreement sets forth specific areas of cooperation/coordination between the two programs.

Question. What would be the effect on administrative overhead of combining the activities of drug and alcohol abuse prevention?

Answer. Virtually no administrative overhead savings would be achieved by combining substance abuse and mental health activities. However, steps have been taken to provide a continuum of care and greater cooperation between the two programs at all levels. A Memorandum of Agreement (MOA) between the mental health and substance abuse programs was recently developed. The MOA addresses the necessity for the two programs to work cooperatively in order to assure the delivery of a comprehensive program of services to meet the multiple (and often related) mental health and substance abuse treatment needs of patients.

QUESTIONS SUBMITTED BY SENATOR RUDY BOSCHWITZ

Question. 1. Please inform the Committee of the "priority" status of the White Earth Health Center (Minnesota) pursuant to the Services' Facilities Construction Priority Ranking System.

a. What level of funding for facilities construction would be required in FY 1990 to permit the Service to initiate the architectural design phase for this project?

Answer. In FY 1990 $982,000 would be required to initiate the planning and design of the proposed White Earth Health Center. The White Earth Health Center is presently number 10 on the IHS Construction Priority List for Ambulatory Care Facilities. Eight of the first nine projects have all received partial funding.

Question. b. How much do you estimate the design phase would cost for the project?

Answer. The current estimate for planning and design of the White Earth Health Center is $982,000.

Question. 2. Assuming architectural design funds are appropriated for the White Earth Health Center in FY 1990, please respond to the following:

a. How long would this take?

Answer. Planning and design of the White Earth Health Center will take 18 to 24 months following appropriation and apportionment of funds.

Question. b. When would the Service be prepared to initiate construction following the design phase?

Answer. Assuming availability of design funds in FY 1990, the Indian Health Service could initiate construction of the White Earth Health Center in the spring of 1992.

Question. c. What is the estimated cost for construction of a new Health Center at White Earth?

Answer. The current, estimated construction cost for the White Earth Health Center is $7,643,000.

Question. 3. If the White Earth Reservation Tribal Council sought an independent source of funds to construct the Health Center, please outline the leaseback arrangements that would be entered into between the Service and the Council.

Answer. At the present time, the IHS operates a small clinic at White Earth comprising approximately 6,700 net square feet at an annual lease cost of $51,000. The White Earth replacement clinic has recently attained ranking on the IHS Health Facilities Construction Priority System. A cost analysis, complete with operating costs, will be prepared to determine whether direct Federal construction or leasing is the more cost effective method of providing for a new health facility. If Congress approves the long-term leasing method, the lease negotiations would be based upon the following factors: size of the facility, current construction costs in the Area, current rental rates in the Area, arrangements for payments of utilities, maintenance, security, etc.

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DEPARTMENT OF EDUCATION

INDIAN EDUCATION

STATEMENT OF BERYL DORSETT, ASSISTANT SECRETARY FOR ELEMENTARY AND SECONDARY EDUCATION

ACCOMPANIED BY:

- A. NEAL SHEDD, ACTING DIRECTOR, INDIAN EDUCATION PROGRAMS, OFFICE OF ELEMENTARY AND SECONDARY EDUCATION
- SALLY H. CHRISTENSEN, DIRECTOR, BUDGET SERVICE, OFFICE OF PLANNING, BUDGET AND EVALUATION
- THOMAS M. CORWIN, DIRECTOR, DIVISION OF ELEMENTARY, SECONDARY, AND VOCATIONAL ANALYSIS, OFFICE OF PLANNING, BUDGET AND EVALUATION

PREPARED STATEMENT

Senator DECONCINI. Now we go to Indian education. Ms. Dorsett, please come forward. Thank you very much. We're now going to have testimony from the Office of Indian Education. We welcome you here, the Assistant Secretary for Elementary and Secondary Education.

Ms. Dorsett, would you like to introduce your people who are with you, Mr. Shedd and Ms. Christensen, Mr. Corwin, or anybody else that you have with you, please. And if you would summarize your statement. Your full statement will appear in the record.

[The statement follows:]

STATEMENT OF BERYL DORSETT

I appreciate this opportunity to appear before you to discuss the fiscal year 1990 Reagan budget request for the Indian Education Act programs. The request totals $74.2 million, an increase of $2.6 million above the fiscal year 1989 appropriation. These increased funds will be applied to several of the programs authorized by the Act.

The 1990 budget now before you is the one submitted by former President Reagan on January 9, 1989. On February 9, President Bush announced his budget plan, which includes an amount equivalent to a freeze at the 1989 outlay total for a group of mostly discretionary grant programs, including the Indian Education program. The 1990 budget levels for these programs are subject to negotiation between the Administration and Congress. Pending the outcome of negotiations with Congress, however, we are treating the Reagan budget proposals as if they are Bush proposals. We hope many of them wind up in the eventual compromise budget solution.

To offset necessary increases proposed in 1989 discretionary appropriations, the President is proposing a Government-wide across-the-board reduction of about 1.1 percent in 1989 appropriations for programs in the President's 1990 budget plan in the residual category. For the Department of Education, this means a total decrease of $185 million from the 1989 appropriated amount.

Subpart 1: Grants to Local Educational Agencies and Indian-Controlled Schools

For Subpart 1--the largest component of the Act--the Reagan budget request is $54.5 million, an increase of $1.8 million over the 1989 level.

Subpart 1 supports two programs for Indian students. Under one, grants are awarded on a formula basis to local educational agencies (LEAs). The other is a discretionary program under which grants are awarded on a competitive basis to reservation-based, Indian-controlled schools. Because Bureau of Indian Affairs (BIA) contract schools are treated as LEAs under the formula program, these schools may receive funds from both programs. Beginning with fiscal year 1989, as a result of the reauthorization of the Indian Education Act, BIA-operated schools are also eligible for formula grants.

Subpart 1 formula grants must be used to supplement the regular school program. Projects provide tutoring, remedial reading and mathematics, counseling and guidance, and Indian cultural and heritage activities. The amount of an LEA's grant is based on a formula that multiplies its Indian student enrollment by the average per-pupil expenditure in the State.

The discretionary funds are also used for special enrichment activities that supplement a regular school program. The amount of each grant is based on the activity planned and competitive applications submitted by tribes and Indian organizations that operate schools on or near reservations.

In fiscal year 1988, we awarded formula grants to 1,054 public and 58 BIA contract schools enrolling a total of 324,000 Indian children. Grants ranged from $1,186 to more than $1 million. Discretionary funds went to 22 Indian-controlled schools serving over 5,000 children, in amounts ranging from $70,000 to $305,000. Sixty-one percent of these schools also received Subpart 1 formula grants.

Formula payments to LEAs in fiscal year 1988 amounted to about $141 for each Indian child counted. Payments under the discretionary program averaged about $652 per child.

For 1990, the Reagan budget proposes that the $1.8 million increase for Subpart 1 be applied to the formula program. These funds will bring the per-pupil payments for the BIA-operated schools up to the level of the payments to other formula recipients and increase slightly the per-pupil payment for the non-BIA-operated schools over the 1989 level.

Subpart 2: Special Programs for Indian Students

The Reagan budget request for Subpart 2 of the Indian Education Act is $12.7 million, an increase of $418,000 over the 1989 appropriation. Of the seven programs that constitute Subpart 2, two are designed to improve educational quality for Indian children; one is designed to meet the special needs of gifted and talented Indian students; three help Indian students train for professional careers--in education as well as other fields; and the seventh supports regional resource centers that provide technical assistance to Indian education projects.

Under the 1990 Reagan request, six of these programs would be continued at current levels. The $418,000 increase would be used for the Educational Services program, primarily to provide funding for dropout prevention projects, an area of particular concern in the Indian community that became a separate area of activity in 1989 as a result of the reauthorization.

Subpart 3: Special Programs for Indian Adults

Under Subpart 3 of the Act, the Reagan budget request is $4.1 million, an increase of $136,000 over the 1989 appropriation, to support education programs for Indian adults. Subpart 3, which is a competitive grant program for Indian tribes and organizations, emphasizes adult basic education, especially literacy, and preparation for the high school equivalency exam. Although there has been some improvement in the educational status of Indian adults, there is still a great need for assistance. More than 300,000, or 44 percent, of Indian adults aged 25 and older have not graduated from high school. About 60,000, or 8 percent of this age group, have had less than a 5th-grade education. The requested increase will help us reach Indian adults with the greatest needs, including those located in isolated areas.

Subpart 4: Salaries and Expenses

For program administration -- which includes the Office of Indian Education as well as the National Advisory Council on Indian Education--the 1990 Reagan request is $2.8 million, an increase of $268,000, primarily to cover personnel costs associated with the annual pay raise and the reorganization of the Indian Education office. A portion is for common support expenses (communication, mail, and rent), and the remainder is for personal services, travel, contracts, and automated data processing.

BIOGRAPHY OF BERYL DORSETT

POSITION : Assistant Secretary for Elementary and Secondary Education

BIRTHPLACE AND DATE : New York, NY, August 8, 1940

EDUCATION : Baruch City College, 1964, B.B.A.; City University of New York, Graduate Studies; Hofstra University, Graduate Studies

EXPERIENCE

Present : Assistant Secretary for Elementary and Secondary Education, U.S. Department of Education
1987 : Acting Assistant Principal, Public School 229, New York, NY
1986 - 1987 : Acting Principal, Public School 73, New York, NY
1985 - 1986 : Coordinator, Social Studies, New York City Board of Education
1984 - 1985 : Sabbatical for study in Africa
1983 - 1984 : Assistant to Principal, Mott Community Junior High School, Bronx, NY
1979 - 1983 : Director, Chapter 1 Programs, New York City Board of Education
1978 - 1973 : Coordinator, Chapter 1 Funded Programs, New York City Board of Education
1965 - 1973 : Teacher, New York City Board of Education

HONORS AND AWARDS : Numerous Civic and Educational Recognitions

INTRODUCTION OF ASSOCIATES

Ms. DORSETT. Yes; good morning, Mr. Chairman. I'd like now to introduce my colleagues. To my right, we have A. Neal Shedd, who is Acting Director of the Office of Indian Education. To my immediate left is Thomas Corwin, who is the Director, Division of Elementary, Secondary, and Vocational Analysis of the Office of Planning, Budget, and Evaluation. To my far left is Ms. Sally Christensen, who is Director, Budget Service, Office of Planning, Budget, and Evaluation.

SUMMARY STATEMENT

Mr. Chairman and members of the committee, I appreciate this opportunity to appear before you to discuss the fiscal year 1990 Reagan budget request for the Indian Education Act programs.

The request totals $74.2 million, an increase of $2.6 million above the fiscal year 1989 appropriation.

The 1990 budget now before you is the one submitted by former President Reagan on January 9, 1989. On February 9, President Bush announced his budget plan, which includes an amount equivalent to a freeze at the 1989 outlay total for a group of mostly discretionary grant programs, including the Indian Education Program.

The 1990 budget levels for these programs are subject to negotiation between the administration and Congress. Pending the outcome of negotiations with Congress, however, we're treating the Reagan budget proposals as if they are Bush proposals.

For subpart 1, the largest component of the act, the Reagan budget request is $54.5 million, an increase of $1.8 million over the 1989 level.

Subpart 1 supports two programs for Indian students. Under one, grants are awarded on a formula basis to local educational agencies. The other is a discretionary program under which grants are awarded on a competitive basis, to reservation-based, Indian-controlled schools. Because the Bureau of Indian Affairs contract schools are treated as LEA's under the formula program, these schools may receive funds from both programs. Beginning with fiscal year 1989, as a result of the reauthorization of the Indian Education Act, BIA-operated schools are also eligible for formula grants.

For 1990, the Reagan budget proposes that the $1.8 million increase for subpart 1 be applied to the formula program. These funds will bring the per-pupil payments for the BIA-operated schools up to the level of the payments to other formula recipients and increase slightly the per-pupil payment for the non-BIA-operated schools over the 1989 level.

The Reagan budget request for subpart 2 of the Indian Education Act is $12.7 million, an increase of $418,000 over the 1989 appropriation. Six of the seven programs that constitute subpart 2 will be continued at current levels. The $418,000 increase would be used for the Educational Services Program, primarily to provide funding for dropout prevention projects, an area of particular concern for the Indian community that became a separate area of activity in 1989 as a result of the reauthorization.

Under subpart 3 of the act, the Reagan budget request is $4.1 million, an increase of $136,000 over the 1989 appropriation, to support educational programs for Indian adults. Subpart 3 emphasizes adult basic education, especially literacy, and preparation for the high school equivalency exam. The requested increase will help us to continue to reach Indian adults with the greatest needs, including those located in isolated areas.

The last area, under subpart 4, program administration, includes the Office of Indian Education, as well as the National Advisory Council on Indian Education. The 1990 Reagan budget is $2.8 million, an increase of $268,000, primarily to cover personnel costs associated with the annual pay raise and the reorganization of the Indian Education office.

Thank you, Mr. Chairman. My colleagues and I would be happy to answer any questions that you may raise.

INCREASE FOR FORMULA GRANTS

Senator DeConcini. Thank you. I noticed that your 1990 request for grants to local educational agencies is increased by $1,793,000 over 1989. The increase is to be applied to the formula grant program in order to continue the policy of gradually equalizing the per-child payments for the formula grants and awards to Indian-controlled schools.

What's the current discrepancy between these two programs?

Mr. Shedd. I'm going to ask Tom to answer that one.

Mr. Corwin. For 1989, we estimate that the average grant to a local educational agency would be about $144 a child. For the BIA schools, which are just phasing in now, it would be about $99. And then for the Indian-controlled schools, we estimate $648 a child.

Senator DeConcini. What amounts to the big differential here? Why is it so much more?

Mr. Corwin. The basic statute authorizes up to a 10-percent set-aside for the Indian-controlled schools. The Congress has given us either report language or appropriation language in the past, which has accounted for that difference.

COST OF EQUALIZING SUBPART 1 PROGRAMS

Senator DeConcini. What is the total funding required to make them comparable?

Mr. Corwin. I don't know if I can do that here.

Senator DeConcini. OK. You want to supply that?

Mr. Corwin. Sure. It would be quite a lot, quadrupling the program, I think.

[The information follows:]

Cost of Equalizing Subpart 1 Programs

If these payments were made comparable at the level provided under the formula grant program, $51,707,000 would be required for subpart 1 for 1990. If they are made comparable at the level provided under the Indian-Controlled Schools Program, $231,076,800 would be required for subpart 1 for 1990.

ELIGIBILITY OF BIA SCHOOLS

Senator DeConcini. Under the 1989 budget, it provides additional funds to reflect the legislative changes which extended the formula grant program eligibility to schools operated by the BIA.

Do you know how many BIA-operated schools will be eligible?

Ms. Dorsett. Yes; about 100 BIA-operated schools.

Senator DeConcini. About 100.

Ms. Dorsett. Yes; serving something like 27,000 students.

Mr. Shedd. But we don't know how many will be applying.

Senator DeConcini. Yes; you don't know. You've notified them all? You've sent them all notices so they know about it?

Mr. Shedd. Yes; that process begins this week with the publishing in the Federal Register, of the closing date notice for the receipt of applications. The closing date will be May 1. In the meantime, the program staff and the resource and evaluation center staff are providing technical assistance to those schools.

Senator DeConcini. What do you anticipate? Do you anticipate most of them will apply?

Mr. **Shedd**. We do, and we hope they will. But there are some rural, isolated situations and we don't know how well we'll be able to get to them.

PROPOSED REGULATIONS

Senator **DeConcini**. A notice of proposed rulemaking was published in November 1988, to reflect the inclusion of these BIA-operated schools as eligible applicants.

What's the status of that proposed rulemaking?

Mr. **Shedd**. The final rules have been prepared.

Senator **DeConcini**. They are out?

Mr. **Shedd**. They're not published yet. All of the rules that we proposed, including the fellowship rules, will be published in April in final form.

ADDITIONAL NACIE MEETING

Senator **DeConcini**. Let me just touch on one other question here. Additional funds are requested for consultants for the National Advisory Council on Indian Education [NACIE] to conduct an additional council meeting in fiscal year 1990. Why are consultants necessary for the conduct of additional meetings? Can't you do that in-house? Ms. Dorsett, haven't you done it before?

Mr. **Shedd**. I believe those are separable items, Mr. Chairman.

Senator **DeConcini**. Is that right?

Mr. **Shedd**. Yes, sir.

Mr. **Corwin**. I think the National Council contracts for support services to help them with their meetings—for the transcript, to prepare any reports, and so forth.

They have a pretty small staff at the council. I think they need, during that peak period when they're having a meeting, some additional help.

Mr. **Shedd**. They only have five people on the staff.

Senator **DeConcini**. And they can't do these kinds of meetings with that staff? Is that what you're telling me?

Mr. **Shedd**. That's correct.

Senator **DeConcini**. Well, I'll submit the balance of my questions.

Senator Domenici, Dr. Rhoades is still here. But right now, we have the Office of Indian Education. I asked Dr. Rhoades to stay when I was advised that you wanted to ask some questions.

Do you have any questions of the Office of Indian Education?

CONDITION OF INDIAN EDUCATION

Senator **Domenici**. Yes; I do, Mr. Chairman. I'll try to do those quickly, and then I would very much appreciate the opportunity to talk for a moment on the record with Dr. Rhoades.

Mr. Chairman, let me first say that, it's very good to have an ally such as you on Indian issues. The United States talks an awful lot about its many problems, but in my opinion, the Indian people in the United States are living in the most unacceptable conditions of any of our citizens. Perhaps, I shouldn't say that, because I don't know about every problem in the whole of the United States, but I know about the Southwestern part of the country.

It has been this country's policy to permit the Indian people to maintain a form of government and a type of living that is not necessarily, in all respects, consistent with those of the average American. Our failure is that the minority in the United States that is living in the most unacceptable conditions of all Americans is the Indian people.

It is absolutely incredible that in the midst of this economic recovery that we are all so proud of, that we still have up to 40 percent of Navajo adult men and women unemployed.

I understand that it is not an easy thing to solve and, clearly, it's everybody's job to try. But let me submit to you that there is plenty of blame to go around. At the same time we're all concerned about the lack of competitiveness of our educational system, we have an Indian education system off the scale of comparison. We rather regularly compare the average American student in fields of math and science to those in many of the countries that have learned from us how to compete—Japan, Taiwan, West Germany.

And we have already had one major report calling this "America at Risk." I guarantee you if America's at risk, Indian education is a disaster. It's beyond the risk stage. It is already out of any proportion to fairness.

I'm not taking this opportunity to beat up on the Department of Education, I simply submit to you that the time has come for somebody in the administration, and that generally is your job, BIA's, and the President's, to tell us what we can do to lift Indian education, at least over a period of years, to some kind of parity with the average student in New Mexico and the average student in the United States.

I can tell you without fear of being wrong that, with very few exceptions, that is not the case. In my State, we have a few exceptions. We have a Jemez Indian group that runs their own school, and their SAT's and other test scores come out fairly well.

I think it's fair to say that for people like the Navajo Indians, this educational system that we ask BIA to run in the name of the Federal Government is not working.

I submit to you that this is an opportunity for the new head of the Bureau of Indian Affairs, and the Secretary of the Interior, as well as the Secretary of Education to be honest with the Indian People and with the Congress.

NEED FOR CHANGE

The Indian education system is not working, and we'll take some of the blame. But somebody has to tell us what we ought to be doing differently. I submit to you, it's not going to work to continue to have hearings, talk about budget numbers, and talk about the need for funding increases. We need to recommend in a reasonable and specific manner, with Indian input, ways to improve this educational system.

If I've said anything that is not true, I apologize. But what I understand is that if the American student is behind the eight-ball in terms of this generation of demands, the Indian people haven't even gotten to the table to play the game. They are coming out of 12th grade with 9th grade and 8th grade, or less proficiencies. They are coming out without the capability of speaking English well and being able to compete in the marketplace. Frankly, I don't believe we can continue to let that happen.

If the Indian people have a responsibility to improve their educational system, we've got to start telling them so. If the Federal Government does, we've got to start doing something about it.

I want to take this opportunity to tell you that I am not trying to nitpick; this is a major, major problem. You can ask for another $10 million here, or $7 million there, or take care of two schools that have been waiting forever to get remodeled. It is not enough that somebody can say, hoorah, we did a neat thing. You gave us a new school and isn't that wonderful. We waited 12 years, and we're finally going to get that new school.

That isn't the issue. The issue is an overhaul of the Indian education system. I don't believe we can go back to old things, Mr. Chairman. We've got to have something different, because we're not getting the job done. Now is the time to start this effort, in my opinion. The new Secretary of the Interior, my good friend, Manuel Lujan, is willing. He is taking the Secretary of Education out to visit BIA's Indian schools. For starters, we need to make sure he sees the reality, that he doesn't get the Bureau of Indian Affairs showing him just the good things. There are so darned few of them. We ought to show him the bad things for the whole trip, in my opinion.

So that's the end of my speech, Mr. Chairman. If it requires a response, super; if it doesn't, I'll get on to the next witness.

Senator DECONCINI. Ms. Dorsett?

EFFORTS OF DEPARTMENT OF EDUCATION

Ms. DORSETT. I just want to say that I totally agree with you, sir. In the Office of Indian Education, we are addressing the very serious needs of the Indian community. We are putting our efforts into finding solutions to resolve those problems.

You know that the statute now calls for Indian preference in hiring. We will be putting more Indians into that office who can specifically identify with the problems of the Indian community and help us to come up with solutions and recommendations to resolve the problems.

I have visited Indian communities myself, and I have seen some very good projects and I've seen some projects that are not as good. I think that it really depends upon the leadership in those communities and a real serious commitment to make a change.

I really feel that no amount of money is going to make the difference unless communities commit themselves to making a change. And that change begins with, of course, the building principal and efforts on the part of the parents.

I do agree with you, Mr. Chairman, and we'll take your advice very seriously and see what we can do to make improvements, drastic improvements in that area.

BUDGET PRIORITIES

Ms. CHRISTENSEN. Mr. Domenici, I would also add that the secretary's highest priority, as you know, is disadvantaged and handicapped populations. He has devoted over 85 percent of the total budget to education for those populations. It's about $19 billion. There are also the programs for which he has targeted increases in our budget, programs such as chapter 1, vocational education, needy college students, drop-out prevention.

What that budget does currently is target at least one-half-billion dollars, out of about a dozen major programs, on the Indian population. These will continue to be funded and increased, as the requests for which we're testifying are appropriated.

CONTACTS WITH INDIAN COMMUNITY

Mr. SHEDD. Mr. Domenici?

Senator DOMENICI. Yes, sir.

Mr. SHEDD. The secretary has done something that's new and unusual for the first time in many years. He's turned to looking at Indian education and its problems. He has met with the National Congress of American Indians, the National Indian Education Association officers, and he's asked me to help him open dialog with those people and other groups, and we'll be doing that.

It was a banner day when he met with both groups on the same day last week.

NEED TO IDENTIFY PROBLEMS

Senator DOMENICI. I agree wholeheartedly. Let me, however, suggest to you that American education—kindergarten through 12th grade—is not easy to fix. I'm not being critical, but those who think that improvements are going to occur because people are talking to each other, or that trying to meet the needs of one group or another will solve these problems, are badly mistaken.

If the American system needs an overhaul, and it clearly does with greater, revised accountability, curricula, and a partnership among children, their parents, and the schools, the Indian education system needs it to an even larger extent. The Indian people are not immune from such changes.

So I am not suggesting here that this overhaul is going to occur with everybody sitting around a table being nice to each other. That's just the start. What we've got to do is identify what is inherently wrong with the system, if that is the case.

If there isn't, then it's pretty easy to fix. I submit that there has got to be something inherently wrong with the system. If someone wants to say it's dollars, prove it. If it is, we'll get you some money, I'm sure.

I believe we can have a major impact on the system with even $10 or $15 million. It's just that we don't know what to do next.

I sincerely appreciate Secretary Cavazos' interest. He was in New Mexico right after his appointment to honor one of our public schools. I took the opportunity to remind him that some Indian education programs were within his jurisdiction and that he ought to be interested. I'm glad that he is. Thank you.

Mr. Chairman, could I ask a question of the good doctor who heads up the Indian Health Service, even though he is not at the witness stand.

ADDITIONAL COMMITTEE QUESTIONS

Senator DeConcini. Yes; Senator Domenici, we're finished with the Office of Indian Health. You can be excused. Thank you very much. We appreciate your testimony. I have some questions which I will be submitting to you, probably tomorrow. They're still being put together.

Ms. Dorsett. Thank you very much.

Senator DeConcini. You're welcome. Thank you.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

GRANTS TO LOCAL EDUCATIONAL AGENCIES AND INDIAN-CONTROLLED SCHOOLS

Question: In FY 1989, Congress provided additional funds to reflect the legislative change that extended the formula grant program eligibility to schools operated by the Bureau of Indian Affairs. How many BIA-operated schools will be eligible?

Answer: We understand there are approximately 100 BIA-operated schools that would be eligible to apply for formula grants.

Question: Are all of these schools expected to apply?

Answer: The application deadline for fiscal year 1989 funds is May 15. We do not know how many of the eligible schools will actually apply. The Department has received numerous inquiries from these schools and BIA officials. Applications have been mailed to all of the BIA schools. The Department of Education Regional Resource and Evaluation Center staff are available to assist the schools in planning their programs.

Question: What is the review procedure for these applications?

Answer: These applications will be treated the same as those from other eligible local educational agencies (LEAs). As long as they meet all application requirements, they will receive funding according to the statutory formula.

Question: A Notice of Proposed Rulemaking (NPRM) was published on November 16, 1988, to reflect the inclusion of these BIA-operated schools as eligible applicants. What is the status of this proposed rulemaking?

Answer: These regulations are in the final stages of the review and clearance process. The final regulations are expected to be published in April.

Question: What types of comments have been received?

Answer: Four parties submitted comments on the NPRM. Some of the commenters addressed the length of the period during which students may be counted for inclusion in the LEA's grant payment calculation. Two suggested that the count be taken any time during the school year, with one suggesting that it be a cumulative count. Two commenters suggested that the description of application requirements be retained in the regulations even though these requirements are described in the application package. One commenter recommended requiring that half of the members of parent committees be Indians, although this was not one of the areas addressed in the NPRM. Another recommended substituting the term "objectives" for the term "goals" when describing an LEA's project, since most projects operate under short-term objectives rather than long-term goals. This commenter also questioned the procedures for amending an application.

Question: The proposed rulemaking also includes changes regarding the minimum information to be contained on student certification forms. What will these new information requirements be?

Answer: The Hawkins-Stafford Amendments maintain the items that previously had been required by statute. However, the amended statute also stipulates that an otherwise incomplete form can be accepted, provided it contains the student's name, name of tribe, band, or group with which the student is affiliated, and the parent's signature and date. The proposed regulations adopt this new provision and also allow additional time for the LEA to obtain the parent's signature.

Question: How will the information be used?

Answer: As stipulated in the statute, the requested information will be used to verify that the children claimed on applications are eligible for funding.

Question: How is additional information intended to improve the program?

Answer: No additional information is requested in the proposed regulations.

Question: Under the non-formula part of this program, funds are awarded on a competitive basis to reservation-based, Indian-controlled schools. How many schools are eligible for these grants?

Answer: Indian-controlled schools include LEAs that are located on or near reservations and that are not more than three years old, BIA contract schools, and other Indian schools that are not eligible for or that do not receive BIA support. We do not know the total number of these schools, but the BIA contract schools are the largest participant group. There were 65 BIA contract schools in 1988.

Question: How many applications were submitted last year?

Answer: Thirty-two applications were submitted for fiscal year 1988 grants to Indian-controlled schools.

Question: The FY 1990 request for grants to local educational agencies is increased $1,793,000 over the FY 1989 level. The increase is to be applied to the formula grant program in order to continue the policy of gradually equalizing the per-child payments for the formula grants and awards to Indian-controlled schools. What is the current discrepancy between the two programs?

Answer: Based on the 1990 request, the estimated per student payment for the formula grant program for FY 1990 would be $145, compared to $648 per student for the Indian-Controlled Schools program.

Question: What is the total funding required to make the two comparable?

Answer: If these payments were made comparable at the level provided under the formula grant program, $51,707,000 would be required for Subpart 1 for 1990. If they are made comparable at the level provided under the Indian-Controlled Schools program, $231,076,800 would be required for Subpart 1 for 1990.

Question: Does the Administration have a long-term plan for achieving full equalization of the two payments?

Answer: We do not have a specific schedule for equalizing these payments but hope that eventually it will be achieved.

Question: When is this equalization likely to occur?

Answer: Equalization of these payments will depend on the level of future appropriations and the wishes of the Congress.

Question: What is the future you see for the Indian Education program?

Answer: We do not foresee any dramatic changes in the focus or level of funding for this program in the future. Our efforts will concentrate on strengthening the program through improving the quality of projects. This will include giving higher priority to reviewing project performance and providing feedback to grantees on where improvements are needed and how they can be achieved.

Question: How can the Department better address the needs of Indian students?

Answer: We believe that improving the quality of projects receiving funding under the program will better address the needs of Indian students.

SPECIAL PROGRAMS FOR INDIAN STUDENTS

Question: Planning, pilot, and demonstration programs are aimed at demonstrating the effectiveness of educational approaches for Indian students at the preschool, elementary, and secondary levels. In 1988, sixteen projects were funded--two planning, nine pilot, and five demonstration projects. How does this split compare with prior years?

Answer: The following chart shows the distribution of grants under the Planning, Pilot, and Demonstration program for fiscal years 1986 through 1988.

	1986	1987	1988
Planning projects	8	5	2
Pilot projects	12	7	9
Demonstration projects	5	5	5
Total	25	17	16

Question: How many applications were submitted?

Answer: Fifty-four applications were submitted in fiscal year 1988 for planning, pilot, and demonstration grants.

Question: Are grant recipients eligible to reapply?

Answer: Yes, all grantees may reapply. For multi-year projects, awards after the first year are made on a non-competitive basis. New applications are subject to the annual competition.

Question: How do educational services projects differ from the planning, pilot, and demonstration program?

Answer: Ideally, a project would progress through the planning, pilot, demonstration, and educational services programs. In the planning stage, a project would be designed. As a pilot project, it would be tested. If it were a demonstration project, it would disseminate effective practices based on the pilot findings. As an educational services project, its sole function would be to provide services.

Question: Educational personnel development projects train Indians for careers in education. There are two programs--one for universities with graduate programs in education and the other for awards to tribes for undergraduate programs to train Indians for careers in education. What is the division of funds between the two aspects?

Answer: For both fiscal years 1988 and 1989, the total appropriation for these activities is $2,262,000. For both years, $1,093,000 will be used for the program that provides awards to tribes and $1,169,000 will be for the program that supports university programs.

Question: How is this split determined?

Answer: The split in funding for these two programs is based on the historical pattern of high quality applications from the two types of applicants.

Question: On what basis are grants awarded to universities?

Answer: Educational Personnel Development grants are awarded to universities on the same basis they are awarded to other grantees. Applications are evaluated by field readers according to criteria described in the program regulations. The scores awarded to each application for these criteria determine the relative ranking of the applications on a slate. Funds are awarded to the highest-ranking applications.

Question: Do the same schools receive the grants from year to year?

Answer: During the past five years, approximately 50 percent of the educational personnel development grant recipients received grants for three or more years.

GIFTED AND TALENTED PROGRAM

Question: In FY 1989, Congress provided $500,000 for the Department of Education to initiate a pilot gifted and talented program. The Department will be reporting back to the Committee on the costs associated with this program once the grant recipients are determined and they have conducted the necessary analysis. What is the status of grant awards for the $500,000 appropriated in FY 1989?

Answer: The $500,000 appropriated for FY 1989 will be used for a contract to establish the pilot program described in the 1989 conference report. The program will provide information needed to identify and assess alternative methods for meeting the needs of gifted and talented Indian students and will provide the basis for the demonstration projects and services to be conducted by the gifted and talented centers. A request for proposals is being developed for publication in the Commerce Business Daily. An award is expected to be made in September for activities to be carried out during the 18 months from October 1, 1989.

Question: How many applications have been submitted?

Answer: Applications will not be submitted until the request for proposals is published.

SPECIAL PROGRAMS FOR INDIAN ADULTS

Question: In FY 1989, Congress provided an additional $1,000,000 to help address the educational needs of Indian adults. An additional increase of $136,000 is proposed for FY 1990. What is the status of this funding?

Answer: Applications have been reviewed by field readers and a slate of recommended awards prepared.

Question: Have the grants been awarded?

Answer: Grants are expected to be announced in June.

Question: What will the additional funds be used for?

Answer: With the 1989 increase, we expect that some additional projects will be funded and that projects will receive increased support to reflect higher costs. The 3.4 percent increase proposed for 1990 will offset inflation.

STAFF REORGANIZATION

Question: During FY 1989, the Office of Indian Education will undergo a reorganization to bring its structure more in line with the other education program offices. Ms. Dorsett, what changes resulted from this reorganization?

Answer: Prior to the reorganization, the Office of Indian Education was the equivalent of a division and was divided into five branches. As a result of the reorganization, the Office now has two divisions and four branches. They are the Division of Program Operations, with Western and Eastern Branches, and the Division of Program Support, with a Grants Administration Branch and a Fellowship and Contracts Administration Branch. Six new supervisory positions were created, two division directors (GM 14/15) and four branch chiefs (GM 13/14).

Question: Will more persons be hired, or existing staff promoted?

Answer: The new positions could be filled by persons not currently on the staff or by current staff who are promoted, but the total number of positions for the office will not increase.

Question: Were these positions competed openly?

Answer: Yes, the new supervisory positions are being competed openly. Applications for these positions and that of the Deputy Director of the Office, which is currently vacant, are now being reviewed and rated. As required by the Indian Education Act of 1988, preference will be given to Indian applicants. The Department expects to begin filling these positions by mid-May.

Question: What changes in personnel costs are associated with this reorganization?

Answer: Personnel costs will increase by about $65,000 annually as a result of the reorganization. Because we do not expect anybody to be hired before mid-May to fill the supervisory positions created by the reorganization, the additional costs in FY 1989 will be an estimated $25,000.

Question: Is the reorganization being implemented in FY 1989 within available funds?

Answer: Yes, funds available for FY 1989 should be sufficient to implement the reorganization.

Question: How do you reconcile proceeding with this reorganization given the Committee's reprogramming guidelines, which state "...a reprogramming...includes proposed reorganizations even without a change in funding"? (House Report 99-714)

Answer: We do not believe this reorganization constitutes a reprogramming under the guidelines in House Report 99-714. The House report describes reprogrammings as including "the reallocation of funds from one budget activity to another" or "any significant departure from the program described in the agency's budget justification." No reallocation of funds was involved in the reorganization. Also, the functions of the Indian Education office will not change as a result of the reorganization. Therefore, there is no significant departure from the program described in our 1989 budget justifications.

PROGRAM ADMINISTRATION

Question: Additional funds are requested for consultants for the National Advisory Council on Indian Education (NACIE) to conduct an additional council meeting in FY 1990. Why are consultants necessary for the conduct of an additional meeting?

Answer: The term "consultants" refers to NACIE members. The increased funds requested for consultants are to cover the honoraria that would be paid to NACIE members for attending an additional meeting. Because they are not staff of the Department, NACIE members must be classified as consultants for payment purposes.

Question: In total, how much additional funding is requested for this meeting?

Answer: Holding an additional NACIE meeting will cost approximately $15,500.

Question: An increase of $9,000 is requested for employee awards. The budget justification indicates that some employees will not receive awards if they are promoted under the new office structure. Why is this?

Answer: We had anticipated that the reorganization would result in a number of the current employees being promoted to fill the new positions. As a general rule, employees who are promoted during a fiscal year do not receive awards in that same year.

Question: If some employees are no longer eligible, why is an increase proposed?

Answer: While employees generally do not receive promotions and awards in the same fiscal year, they could receive awards in the fiscal year following the year in which a promotion was received.

FUNDING REQUEST HISTORY

Question: In the Department's request to OMB, $71,507,000 was requested for program funds and $2,655,000 was requested for program administration. The request to Congress is $71,402,000 for program funds, a decrease of $105,000 from the request to OMB. On the administrative side, however, OMB allowed an increase of $111,000 over what the Department requested. Why was this increase allowed?

Answer: The 1990 Reagan budget request reflects a 3.4 percent increase for each line item of program activities. A higher increase is needed for program administration to cover increased costs.

Question: How will these funds be used?

Answer: These funds will be used for the costs of the January pay raise, the program office's and NACIE's full share of common support expenses, and the implementation of the reorganization of the program office.

QUESTIONS SUBMITTED BY SENATOR JAMES A. MCCLURE

GIFTED AND TALENTED PROGRAM

Question: In FY 1989, an additional $500,000 was provided to the Department to initiate a gifted and talented pilot program. The conference report requested that the Department assess the costs associated with this program against programs benefitting more students. The authorization provided for two centers at tribally controlled community colleges. What is the status of this program?

Answer: The $500,000 appropriated for FY 1989 will be used for a contract to establish the pilot program described in the 1989 conference report. The program will provide information needed to identify and assess alternative methods for meeting the needs of gifted and talented Indian students and will provide the basis for the demonstration projects and services to be conducted by the gifted and talented centers. A request for proposals is being developed for publication in the Commerce Business Daily. An award is expected to be made in September for activities to be carried out during the 18 months beginning October 1, 1989.

Question: Have the recipients been notified?

Answer: The recipient of the contract award will not be known until applications have been submitted and evaluated.

EDUCATIONAL PROGRESS

Question: The justification on page 13 indicates that progress has been made in the education of Indians. From 1970 to 1980, the percentage of Indian adults 25 and over who were high school graduates increased from 33 percent to 55.8 percent. In addition, the median years of school completed for the Indian population aged 25 and over increased from 10 years to 12 years. Can you update those figures for the Subcommittee?

Answer: These data are based on the 1980 Census. No new data will be available until after the 1990 Census.

Question: If we are meeting with such educational success, why do Indians lag behind the national average in per capita income and the percentage of families above the poverty level?

Answer: Although much educational progress has been achieved by Indians, they still have a long way to go. As a group, they still remain far below the national averages for years of schooling completed, income, and poverty rate.

Question: Is this a quality effort we are putting forth?

Answer: Although many of the projects funded by the Indian Education program are of high quality and are achieving their stated goals, others need to improve their efforts to meet the educational needs of Indians.

Question: How much will the proposed rulemaking (p. 16) help in this area?

Answer: One provision of the Notice of Proposed Rulemaking would require applicants whose projects are not making satisfactory progress in meeting their established goals to submit amended applications that state the changes that will be made in order to meet those goals.

ROLLING AUDITS

Question: The Department is under a statutory mandate to conduct program audits of one-third of the formula grant recipients each year. These so-called "rolling audits" have been carried out since 1981 and nearly all the local agencies have been visited at least once and many have been visited two or three times.

The Department has begun to use alternative methods to conduct these audits. The justification indicates that telephone monitoring is less costly and yields much of the same information. What other methods are you using?

Answer: In addition to site visits and telephone monitoring, the annual performance reports of all grantees are reviewed.

Question: How effective are these other audit methods?

Answer: A grantee's performance report provides valuable information about the results of the project's activities in any given year. Like the information received from other monitoring approaches, it can be used to help grantees improve their efforts in subsequent years.

BIA SCHOOLS/FORMULA GRANTS

Question: Regulations incorporating the provisions contained in the Hawkins-Stafford Amendments were proposed in November of 1988. The major change in the regulations is the inclusion of BIA-operated schools as eligible applicants for formula grants. What is the status of the regulations?

Answer: These regulations are in the final stages of the review and clearance process. The final regulations are expected to be published in April.

Question: How does your budget request incorporate this change?

Answer: The budget request for the formula grant program is estimated to be sufficient to bring payments to the BIA-operated schools up to the level of payments to other LEAs and to increase slightly the per-pupil payments to the other LEAs over the 1989 level.

Question: The budget contains an increase of $1.8 million (+3 percent) for the formula grant program. The justification indicates that the entire amount would be applied to the formula grant program in order to continue the policy of gradually equalizing per-child payments.

Yet, this increase in the formula payments to local educational agencies only increases the average payment per student for non-BIA-operated schools from $144 per student in FY 1989 to $145 per student in FY 1990. At the same time, the budget provides payments under the discretionary program of $652 per student at Indian-Controlled Schools for both FY 1989 and FY 1990. In addition, as a result of the Hawkins-Stafford Amendments, the average payment per eligible student from BIA-operated schools will increase from $99 per student in FY 1989 to $145 per student in FY 1990. Do you really feel you are addressing this discrepancy between non-BIA-operated schools with a $1 per student increase?

Answer: The major part of the proposed increase would go to bringing the BIA-operated schools up to the level of the schools previously eligible for formula grants, as required by the program statute. Only then can any remaining funds be used to reduce the difference between formula grant payments and payments to Indian-controlled schools. It does not appear that these funds will be sufficient to make any significant difference in the discrepancy between these payments.

Question: It may be too early to tell, but can you evaluate the effectiveness of the Hawkins-Stafford Amendments?

Answer: The Hawkins-Stafford provisions related to the Indian Education program do not lend themselves to evaluation of effectiveness.

Question: Given a choice, are BIA-operated schools where you would have used a budget increase?

Answer: No, we would have preferred to see increased funding for the schools previously eligible for the formula grant program.

Question: To comply with the Hawkins-Stafford Amendments, the Department published a notice of proposed rulemaking relating to the Fellowship program. The major substantive change in the proposed rule is to award fellowships primarily on merit rather than on financial need. The proposed rule, however, does indicate that financial need will still be the determining factor in setting the amount of fellowship awards. Does this mean that the most meritorious fellowships are not going to be compensated and the least meritorious fellowships are going to be compensated?

Answer: No, the most meritorious applicants will still be the ones who receive fellowship awards. However, there will be a change in the way financial need is evaluated. Awards will be provided to cover a student's full education-related costs but will be adjusted to account for any other education financial aid received by the student. This proposed change will greatly expedite the fellowship process.

Question: What does the law allow or require?

Answer: The law does not stipulate how the application process for the fellowship program is to operate.

SUBCOMMITTEE RECESS

Senator DOMENICI. Thank you very much. The subcommittee is in recess until 10 a.m., April 3, when we'll hear testimony from the Office of Surface Mining, the Office of the Secretary, the Solicitor, and the Inspector General.

Thank you.

[Whereupon, at 11:05 a.m., Tuesday, March 14, the subcommittee was recessed, to reconvene at 10 a.m., Monday, April 3.]

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